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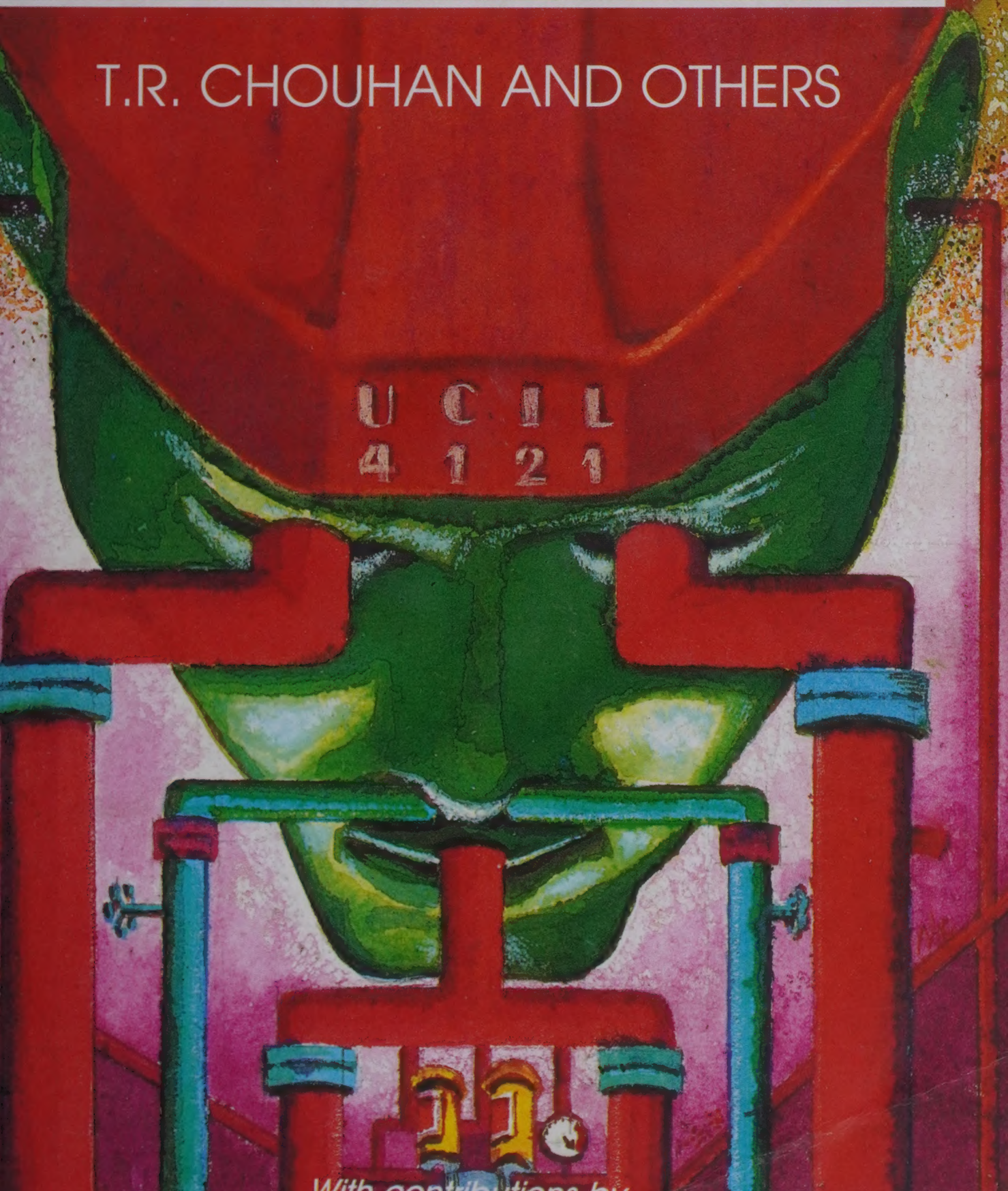
BHOPAL

THE INSIDE STORY

T.R. CHOUHAN AND OTHERS



With contributions by
Claude Alvares, Indira Jaising and Nityanand Jayaraman

Bhopal: The Inside Story

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Carbide workers speak out on the world's worst industrial disaster

by

T. R. Chouhan and others

Other India Press
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A note on Indian currency calculations vis-a-vis the US dollar

Rupees are counted in terms of thousands, lakhs and crores.

1 lakh = 1,00,000 Rupees

10 lakh = 1 million Rupees

100 lakh = 1 crore Rupees

The rupee/dollar rate has varied over the past twenty years.

In 1984, 1 US$ = approx. Rs. 14.

In 1994, 1 US$ = approx. Rs. 30

Today (2004), 1 US$ = approx. Rs. 40.

Wherever US dollar equivalents of Indian Rupees are mentioned, these reflect the worth of the Indian Rupee in terms of the US dollar in 1994 (except if specifically indicated otherwise).

A Note from the Publishers

We first jointly published T. R. Chouhan's *Bhopal: The Inside Story* in 1994. That was nearly a decade after the world's worst industrial disaster had taken place (2/3 December 1984). Thereafter, the book has been out of print.

Another decade has passed in the meanwhile and we thought it appropriate to bring out an updated edition. A whole new generation has appeared on the planet since 1984. A permanent record of the Bhopal gas disaster should be available to it in print so that it can have some idea of the macabre terror associated with that deadly event unleashed on an unsuspecting, populated Indian city by an uncaring and careless American corporation. Chouhan's story, written by someone technically qualified and with insider knowledge, reveals all: the truly scandalous conditions of work at the Union Carbide plant; the scant corporate regard for safety; the continuous drive to cut corners even when such actions potentially endangered public health and life on a fairly large scale.

The stories related by other Carbide workers of corporate malfeasance in this volume, though briefer, are no less depressing. Reading them leaves one with a feeling of consternation that such a well-known American multinational could conduct its business in such an appalling way.

Countries like India invite multinational corporations because it is widely believed that these bring in not only scarce resources but world-class technology. The Bhopal gas disaster blew that conventional belief to pieces, and all the proponents and propagandists of corporate planetary rule have never been able to restore that faith again despite fervent, large-scale, intensive greenwash.

If, twenty years later, public memory relating to the Bhopal gas disaster and its aftermath has not died down in any manner, this is largely due to the organized clamour and feistiness of its maimed and damaged survivors.

There are also other continuing legacies that keep Bhopal in the public consciousness. Legal proceedings related to the disaster continue before Indian and American courts. This year, for example, the Indian Supreme Court directed the Government of India to ensure that the amount of Rs.1560 crores left from the 'settlement' approved by the court in 1994 is fully and finally distributed among the survivors of the disaster. And an American Court has decreed – also this year – that it is willing to recognize Union Carbide's liability to rehabilitate the contaminated site of the disaster, provided either the Government of India or the provincial Government of Madhya Pradesh filed an appropriate request. This has since been done. (Shameful to disclose: the Government of India moved in the matter only after it had been goaded into doing so by irate public opinion.)

Bhopal: The Inside Story makes some important revelations. First, the ruling gangs of the corporate world, even when faced with a calamity of such stupendous proportions on their hands, are unable to say sorry and then to proceed to make amends. Instead, fuelled by legal advice, they proceed forthwith to spin elaborate webs of lies and deceit, and put the blame on everything and everyone but themselves. Disasters, in fact, bring out the worst in them. It is almost as if they retain an insurmountable desire to demonstrate to the world that just because they head organizations that are not natural persons, they too have no heart and are therefore unable to feel any pain.

Second, our popularly-elected political leaders will always support the corporate mafia. They prance about on the world stage, pontificating endlessly about human rights, the environment, the future of planet earth, respect for democracy, progress and the devolution of power. When it comes to actually defending people against corporate wantonness, they will desert them altogether since they are mostly to be found hobnobbing with the corporate perpetrators of such crimes. Required to prepare an elaborate, well-thought out scheme to cope with the suffering of mass victims of their senseless policies and development models, they profess complete disinterest or ineptitude.

This brings us to the third group in charge: the bureaucracy. The bureaucracy is also unable to rise to the challenge presented by such

disasters and by their train of debilitating consequences. In the case of Bhopal, it not only proved to be largely incompetent, it proceeded to obstruct the efficient administration of relief as well. It was also openly careless. It went to the extent of doubting and distrusting the victims, their claims, their need for compensation. In the end, it preferred to hide its predisposition to inaction under rule books, compelling the victims to fill out enormous quantities of paperwork and forms. Its demands generated huge volumes for the xerox industry in Bhopal, since victims were repeatedly asked to attach copies of endless documents. Its niggardliness and distrust spawned a vast new bureaucracy that refused to shut down.

Indira Jaising's essay in this volume (*Legal Letdown*) establishes that the judiciary, the fourth equally influential component of the ruling class, when given the opportunity to do complete justice, preferred to protect the corporation, leaving the victims in the lurch.

Thus, in Bhopal, corporations, government as well as the judiciary abysmally failed the victims. One cannot pretend to believe that they will conduct themselves differently in another place, at another time. *Bhopal: The Inside Story* is thus a premonitionary tale as well. As and when industrial disasters of this magnitude take place, its message to the public is simple: run first, talk later. Nobody will be in command, either during the event or after. In Bhopal, it is the ordinary fighting survivors – ravaged and diseased by Union Carbide's technological abandon – that have ultimately salvaged the honour of the human species.

This book is dedicated to them.

Ward Morehouse
The Apex Press

Claude Alvares
Other India Press

Preface

Ever since the gas, my head aches 24 hours a day. I have pain in my stomach and sometimes feel giddy. My daughter, Nasreen, cannot see properly, cannot thread a needle, and she is only eleven. My other daughter, Sofia, also stays sick and she is eight. I have three children from before the disaster and after the gas I have aborted thrice. All three times it happened in the hospital. Once I was six months pregnant, the second time I was seven months pregnant and the third time I carried the baby for eight months. They were all born dead. All with black skin like the color of coal and all shrunken in size. The doctors never told me why such things are happening to me.

—Ajeeza Bi
Bhopal Gas-Affected Working Woman's Union

The data are extremely important, even if they only tell part of the story. We all know how much is left out of any statistical accounting. We all know that the disaster can never be fully described, that there is a certain treason in telling. But there is even greater treason in forgetting. As we mourn our inability to tell it all, we know that over 600,000 relief claims have been filed; 521,262 people are geographically acknowledged as 'exposed' and, according to the Indian Council of Medical Research, 32.52 percent of those exposed (169,514 people) are overtly symptomatic, with that number increasing, year after year. Lung function tests show 97 percent of the exposed population (508,230 people) as having small airway obstruction, which could lead to future morbidity and now impairs their ability to work. No information is available to document or predict the onset of long-term effects.

—Satinath Sarangi
Bhopal Group for Information and Action

The events of 3 December 1984 left the people of Bhopal shocked and keenly aware of deadly gases in their homes. They woke, thinking neighbours were burning chili peppers. When it became impossible to breathe, they fled into dark streets. With no information on what was happening, they simply ran with the crowd, catching rides on passing vehicles whenever possible. Families were separated; old people and children abandoned. Many ended up on the outskirts of the city or beyond, without money and only the company of strangers. A hard, green crust had appeared on the surface of stored food but people were told that there was no 'scientific reason' for concern that it was contaminated. A helpless dread spread throughout the city, with people very conscious of their lack of control over the continued risks.

When victims approached the Carbide factory for medical aid and information, desperate managers afraid of rioting suggested that another leak might soon occur. This set in motion a second mass flight and an intensification of the uncertainty. People continued to die but there was no information on possible antidotes or remedies. Clearly the effects of the gas were not temporary, and there was increasing fear of long-term consequences. If they lived, would their sight be restored? Would they be able to breathe easily? How were they to earn a living if disabled? What about the effects on unborn children?

Voluntary efforts to combat the suffering and uncertainty in Bhopal came quickly. Initially, organization was completely *ad hoc*. Despite their exhaustion and sickness, victims themselves showed an extraordinary resourcefulness and compassion. They were joined by outsiders who flocked to the city to render any assistance possible. Within days, a political group known as the 'Morcha' ('Front' or 'Movement', in Hindi) was formed to coordinate these efforts.

Morcha activists were completely barred from official information sources. The clamp-down reached from the highest city authorities to the ward nurses at government hospitals. One doctor, when queried about the extraordinary rate of spontaneous abortion, told us that officially he couldn't even tell his own name. As one activist explained, 'from long before the disaster there was a manufactured silence that barred any preventative action. Since then, it has been a long nightmare of fear and ignorance.'

While we shall never know the precise number, responsible estimates place the immediate death toll as high as 10,000, and some

observers believe that half again as many have died since then of gas-related causes.* Union Carbide claimed right after the disaster that methyl isocyanate (MIC) was only a mild irritant! And this claim was made despite the fact that Carbide's own safety manual emphasizes that it is deadly even in very small doses.

Such denials have become a routine part of the continuing disaster in Bhopal, reminding us that rehabilitation not only involves physical health but also a completion of the historical record.

Not long after gas leaked over the city of Bhopal, Carbide announced to shareholders that the Bhopal disaster was behind it, that a future of growth and profits lay ahead. Victims and activists continue to dissent. There have been protests in the streets, arguments before the courts and a persistent attempt to produce documentation that reflects the reality of events in Bhopal.

The writing of this book was provoked by Union Carbide's claim that the Bhopal disaster was caused by a 'disgruntled' worker who purposely contaminated a storage tank with 90,000 pounds of deadly MIC, setting off a chain reaction that resulted in the release of toxic gas into the atmosphere. Among the victims, workers and activists struggling for justice and accountability, T. R. Chouhan, a former MIC plant operator in the Carbide factory, recognized the importance of responding to these claims and thus began the slow process of documenting events leading to the disaster from an insider's perspective. The project became a part of the broader effort to prevent similar problems in the future through continued attention not only to the cause and continuing effects of the disaster, but also to the ways we remember it.

As one activist emphasized, 'our job is to incite responsibility, not pity. If all we did was publish photographs of sick children and desperate women, all we would get is sentimental paralysis. We need to tell a story that counters official attempts to control information and contributes to our understanding not only of the Bhopal disaster, but also to the ways similar abuses of power are so quickly forgotten, and continually repeated.'

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* For varying official and unofficial estimates of death and injuries from the Bhopal disaster, see Joan Ferrante, Sociology: A Global Perspective, Belmont, California: Wadsworth, 1992, p. 195.

The official history confronted by activists is one configured by the price of shares on Wall Street. The shares of Union Carbide rose $2 after the announcement of an out-of-court settlement of the Bhopal case. No liability was established and insufficient funds were made available for rehabilitation. A prominent investment firm nonetheless announced that 'the stigma was passed,' despite simultaneous recognition that there had been no improvement in Carbide's management.

When Carbide shares plummeted just following the disaster, their investment ranking dropped to the lowest possible grade. Analysts justified this ranking through description of 'fundamental weaknesses' in the firm's day-to-day business operations. Union Carbide's resurgence after the out-of-court settlement was not seen as a reversal of this weakness but as a consequence of a general market cycle that improved the outlook for the commodity chemical business.

One investment analyst was quoted in the *New York Times* as insisting that 'the so-called turnaround at Carbide is a result of the improvements in petrochemical markets and not much more.' He nonetheless continued with a euphoric description of the settlement, insisting that 'psychologically, it's terrific. Financially, it's reasonable. This relieves the pressure on Carbide and the stigma.'

Official commentators on Carbide's resurgence made no mention of the uproar caused at a conference on industrial safety at which a Carbide management consultant gave a lecture arguing that the disaster was caused by a plant worker turned saboteur. Other participants at the conference condemned the use of a scholarly forum for propagandistic purposes and pointed to the theoretical fraud of basing alleged technical analysis on the assumption that 'workers everywhere have a tendency to lie, even when they are not implicated.'

Carbide's sabotage theory was first fully presented at a conference of chemical engineers in London during the spring of 1988. The paper, 'Investigation of Large-Magnitude Incidents: Bhopal as a Case Study,' was presented by Ashok Kalelkar, a representative of the management consulting firm of Arthur D. Little. Kalelkar's primary goal was to challenge the water-washing theory put forth by journalists and by India's Central Bureau of Investigation, a theory constructed through the examination of many types of evidence, including the testimony of plant workers.

The water-washing theory implicates Carbide management both for decisions immediately prior to the disaster and for long-term processes of plant design, maintenance and personnel training. In his refutation, Kalelkar insists that 'salient, non-technical features' be investigated, requiring 'an understanding of human skills.' Kalelkar then refutes the water-washing with a technical analysis grounded on the claim that 'there is a reflexive tendency among plant workers everywhere to attempt to divorce themselves from the events surrounding any incident and to distort or omit facts to serve their own purposes.'

Because of this 'reflexive tendency' among workers, Kalelkar bases his investigation on the accounts of peripheral witnesses. A primary witness was an instruments engineer who claimed that, on the morning following the leak, he noticed that the pressure gauge on tank 610 had been removed, leaving an opening through which water could have been inputted from a nearby hose. It took Mr. Rajan over one year to remember this detail, after which he was comfortably relocated to Mumbai. The other primary witness was a 12-year-old tea boy, retrieved after much effort from his native Nepal. The tea boy is said to have been on duty the night of the disaster and described a tense atmosphere just preceding the leak, thus 'verifying' that the workers on-site were involved in a conspiratorial cover-up.

Carbide's sabotage theory pins the cause of the disaster on a five-minute interval when a 'disgruntled' worker attached a water hose directly to a storage tank filled with methyl isocyanide. No mention is made of the reason why there were no safety mechanisms to prevent unauthorized inputs. No mention is made that, according to Carbide's own regulations, the tank should only have been three-quarters full and an adjacent tank empty to allow for transfers in case of emergency. No mention is made that there was no early warning system that would have tracked subsequent rises in temperature, indicating that disaster was imminent. No mention was made that four of five major safety systems failed to work due to indifferent maintenance. No mention was made that these systems were underdesigned to accommodate mass escape of gas at high pressure; thus, MIC flowed through the Vent Gas Scrubber at more than 200 times its maximum capacity.

Workers reject the sabotage theory because they know it is false and because it shifts liability away from management and diverts

attention from the larger context in which the disaster occurred. In this book, T. R. Chouhan challenges the sabotage theory with detained documentation of the safety lapses, maintenance failures and general negligence in the plant since he was hired in 1979. These details attempt to breach the claim that the cause of the disaster was a single 'disgruntled' worker's act. Chouhan insists that the 'whole story' has more of a history, both within the plant itself and within the broader processes of transnational capitalism.

Chouhan's book shows the connection between changing market conditions and the management decisions leading to the disaster, retelling the oft-told story of how corporate loss is externalized and the risk burden borne by workers and communities. Reduction in key personnel and a decline in their training, and experience, carefully documented by Chouhan, eventually manifested themselves in Carbide's plans to relocate the plant. It was not, however, only after dramatic financial losses that conditions at the Bhopal plant became unacceptable. As Chouhan's story makes clear, as early as 1978, workers joked that 'anything could happen in this plant.' The event that provoked this remark was a fire in the plant during which the company fire truck was sitting up on a jack with all tires removed. The company 'managed' the impact of the fire by removing outspoken union leaders and entertaining government officials at posh hotels.

Periodic safety audits were managed in a similar way. Long before the disaster these audits pointed out major safety concerns and explicitly warned of the possibility of a runaway reaction in the MIC storage tanks. They also recognized that there was no evacuation plan for the surrounding community. Bhopal managers told Danbury that to implement such a plan would overly publicize the dangers posed by the plant, which had to be minimized since the company had recently avoided relocation away from the city by having their production labeled 'non-noxious' by zoning authorities.

Despite this history of negligence, the Bhopal litigation was resolved in a collusive and outrageously unjust out-of-court settlement which clearly violated the constitutional rights of the victims. In an interview by *The New York Times,* Bud Holman, Carbide's chief legal counsel in the United States, described the settlement as an almost revelatory experience, opening up a new world for its presumed beneficiaries. Work toward the settlement was 'like walking up a pitch black, winding staircase, and you never know how much farther you

have to go in darkness. Then, all of a sudden, it's light and it's all over.'

Responding to Bud Holman's version of history has involved gas victims themselves, as well as plant workers, health professionals, legal experts and others. As one activist explained, 'the mainstream press, Union Carbide and even the Government of India have represented the Bhopal case as an isolated event, without source and finalized by distribution of cash compensation. There has been an overall attempt to encapsulate and exorcise, all within the logic of the market. Opposition to corporate and official handling of the Bhopal case can be understood as a multifaceted challenge to this encapsulation.'

The response has involved tracking the parameters of the disaster far beyond the two-hour interval in December 1984 when methyl isocyanate was released over the city of Bhopal. The present book is an important contribution to this effort, offering solid evidence that 'Bhopal is no isolated misery.'

The historical reality that 'Bhopal is no isolated misery' points to the victimization process which led to certain communities living in such close proximity to a hazardous industrial facility. The most affected colonies are among the poorest in Bhopal. They are situated just adjacent to the plant so residents were aware that 'poison' was being produced because of the frequency of small leaks and routine emissions that caused nausea and other effects. They were never in a position to protest because, being poor and having no place else to go, they had set up their houses without land ownership or government permission. They continually feared that the slums, not the plant, would be relocated.

Political struggle, as well as historical reality, also emphasize that the disaster continues. As one activist explains, 'beyond doubt, the Bhopal disaster is not over. The disaster continues as people continue to die and suffer, without adequate health care or economic provision. Further, what little relief has been administered has not generated a sustainable response, a response which . . . attends to the harsh reality of an entire community of people permanently disabled and thus unable to generate income in traditional occupations, a response which builds a community infrastructure capable of guarding against future impositions of industrial hazard, a response which disrupts the global control of multinational corporations which blatantly ignore the well-being of the communities in which they work.'

Chouhan's book is a reflection of the persistent collaborative effort to materialize a response to these struggles and realities. It has emerged from a larger collaboration involving activists, academics and other professionals from different groups in different countries, guided by different ideological orientations, different understandings of effective strategy and different styles of working. Cooperation has been a continual but ultimately rewarding challenge.

While many have contributed to *Bhopal: The Inside Story*, including the 15 former Carbide workers offering their personal testimonies, it is above all a manifestation of T. R. Chouhan's determination that at least one version of this story should be told by the only eyewitnesses to the actual event, that is, the workers themselves. Its significance lies not in a technical analysis of the event, although perforce Chouhan has presented his version of such analysis, but in the direct observations and personal experiences it presents. Both as documentation of reality and as an example of effective political collaboration, it makes a vital contribution to the historical record and to the never-ending struggle for social and environmental justice.

Kim Laughlin, Cornell University
Ward Morehouse, Bhopal Action
Resource Center
August 1994

Introduction: The Struggle for Corporate Accountability

'BHOPAL,' THE WORLD'S worst industrial disaster, can only be fully understood within the context of the managerial and technical situation at Union Carbide's Bhopal plant in the years preceding the disaster. Since the plant was established in 1969, the conditions leading to the disaster were building up. Unsafe design of the plant was made still more unsafe by such cost-cutting measures as poor maintenance, use of poorly trained personnel and gross neglect of the most basic safety procedures. These factors turned the pesticide factory into a ticking bomb that could explode at any time. Workers individually and through their unions did not remain silent spectators as this bomb went on ticking. As a plant operator, I was one of the workers who expressed my concerns about the deteriorating condition of the factory. In the following pages, I will describe the events that led to the tragedy and our attempts as workers to prevent the disaster from happening.

I must tell this story of Carbide's greed and negligence for two reasons: First, I must challenge Carbide's 'sabotage' theory, which slanders the good name of workers around the world. By placing blame on a 'disgruntled' worker, Carbide has tried to hide management culpability. This theory shifts the focus of attention from Carbide to a single individual, whom Carbide has identified as a 'typical' worker – stupid, vindictive, prone to lying. The basis of Carbide's sabotage theory is not a reconstruction of facts gathered from those on the site, but a fiction created from stories pulled from peripheral 'witnesses,' easily influenced by interviewers. Carbide's report justifies this unorthodox methodology with the claim that it was necessary due to a 'reflexive tendency among plant workers everywhere to attempt to divorce themselves from the events surrounding any

incident and to distort or omit facts to serve their own purpose.' (Kalelkar, 5)

My second reason for telling the Bhopal story lies in the belief that if evil is not exposed, it will continue to run rampant. Unless we publicize the gross negligence that made the Bhopal tragedy inevitable, similar tragedies are certain to happen in the future. Unless corporate negligence and greed are exposed, we cannot prevent future Bhopals.

The fight for greater corporate accountability must be equally supported by workers, communities directly affected, the government and a committed general public. Cooperation among those whose lives are at risk is essential if we are to successfully challenge powerful industrial interests. Carbide's 'sabotage theory' lays blame for the tragedy on plant workers and denies any fault on the part of Union Carbide. The sabotage theory also conceals the historical context of the disaster. Yet, if such tragedies are to be prevented in the future, we must not imagine them as isolated events caused only by immediate circumstances. To prevent further tragedy, disasters, such as Bhopal, must be understood as inevitable components of inherently hazardous industrial development characteristic of recent decades.

To understand fully the connection between 'development' and tragedies like that in Bhopal, we must carefully trace the decisions surrounding these situations. I will begin the story here and offer further details in subsequent chapters.

The Union Carbide plant in Bhopal opened in 1969 to formulate pesticides. Construction of the plant was part of an encompassing initiative to corner a section of the growing market for chemical agricultural inputs. 'Green Revolution' technology had come to India and was displacing traditional growing methods with high-response seed varieties that required large amounts of fertilizers and pesticides. Carbide's initiative to market pesticides in India was not a benevolent gesture to aid the Third World. The primary motivation was to make money for the American company, not to serve the interests of the Indian people.

Union Carbide Corporation (UCC) is based in Danbury, Connecticut, USA. UCC's Indian operations are carried on by Union Carbide India Limited (UCIL). Stock in UCIL is 50.9 percent held by the parent company and 49.1 percent held by Indian investors. UCC was allowed majority ownership despite government limitations on foreign investment because of the technological sophistication of its op-

erations. UCC chose all production processes, supplied all plant designs and designated operational procedures. UCC also conducted safety audits.

Initially, the Bhopal plant only formulated pesticides, using components imported from the United States. In 1975, the plant was licensed by the Government of India to manufacture these components and began to produce its own carbaryl, the base ingredient for both Sevin and Temik, the two pesticide products UCIL marketed. Methyl isocyanate (MIC) is a chemical intermediate in the manufacture of both Sevin and Temik.

Up until 1979, the Bhopal plant continued to import MIC from a plant in Institute, West Virginia. In 1979, an MIC production unit was added to the Bhopal facility. The plant was designed and all operational procedures specified by UCC.

The Bhopal plant was licensed to manufacture 5,250 tons of MIC-based pesticides per year. However, peak production was only 2,704 tons in 1981, falling to 1,657 tons in 1983. In the first ten months of 1984, losses amounted to Rs.5,03,39,000 (US$4,069,442). UCIL was thus directed by Union Carbide to close the plant and prepare it for sale. When no buyer was available in India, plans were made to dismantle the factory and ship it to another country. Negotiations toward this shutdown were completed by the end of November 1984.

Financial losses and plans to dismantle the plant exacerbated Carbide's already negligent management practices, leading to executive decisions that directly caused the contamination of the MIC storage tank that leaked its contents over Bhopal. While saving money for both UCC and UCIL, negligent maintenance and substantial reductions of trained personnel culminated in the horrors of 3 December 1984.

In the early morning hours of 3 December 1984, 40 tons of toxic gases were released from Carbide's Bhopal plant and spread throughout the city. The cause was the contamination of MIC storage tank No 610 with water carrying catalytic material. The result was a nightmare that still has no end. Residents awoke to clouds of suffocating gas and began a desperate flight through the dark streets. No alarm ever sounded a warning and no evacuation plan was prepared. When victims arrived at hospitals, breathless and blind, doctors did not know how to treat them since Carbide had not provided emergency information.

But it was only when the sun rose the next morning that the magnitude of the devastation was clear. Dead bodies of humans and animals blocked the streets; vegetation was shriveled and yellow; the smell of burning chili peppers lingered in the air. While we shall never know the precise numbers, responsible estimates suggest that as many as 10,000 may have died immediately. More than 500,000 have filed damage claims for personal injuries and economic losses.

UCC was well aware of problems that could lead to disaster. In May 1982, a UCC team of safety experts conducted a detailed examination of the Bhopal plant. The report identified several deficiencies and warned that a leak could occur due to equipment failure or operating problems reflecting high personnel turnover and a lack of safety consciousness. This report was labeled 'business confidential' and thus not made available outside management circles. A similar safety report was done at the West Virginia plant in 1984. The report included warnings of a possible runaway reaction in the MIC storage tank of the plant. This report was also labeled 'business confidential.'

In October 1982, a mixture of MIC, chloroform and hydrochloric acid escaped from the Bhopal plant, injuring 16 workers and endangering the neighbouring community. This incident made very clear the potential public risk, yet there still was no preparation of an evacuation plan. When the plant was being started up, Carbide officials themselves insisted on the need for an evacuation plan. The suggestion was ignored because public relations advisors suggested that pursuing such a plan with local authorities would overly highlight the hazardous nature of the plant.

This history makes clear that the Bhopal disaster was not an 'accident' or an act of sabotage, but the result of a series of decisions made by Carbide management in the years leading up to the tragedy. Carbide's attempt to shift blame onto workers is an attempt to cover up the way human life is disregarded in the corporate board rooms and offices in the United States. It is not workers who put profits before people, but senior management. They are far removed from the risks of the technologies that bring them wealth. They design and operate plants to maximize the inflow of money while safety and maintenance are given much lower priority, especially if a plant is losing money. According to such corporate logic, cost cutting almost always means lowering safety standards and increasing the chances of a serious incident, if not a catastrophe.

1

Working at Carbide

IN 1975, I was in the middle of studying for my diploma in pharmacy when there appeared in the newspapers an advertisement of job vacancies in the Union Carbide factory in Bhopal. Family and friends in my small hometown – 150 km from Bhopal – said that I should try for a job in the Carbide factory, since it was quite a good opportunity and it was time I started earning. So I applied for a job as trainee operator, was accepted and dropped out of my pharmacy studies.

When I joined on 11 August 1975 at Rs.200 (US$22.50) per month, I knew little about the factory, except that they produced insecticides. I did not even know that the chemicals were dangerous. There were about 45 people in our batch of trainees and the going was good for the first few months. We were told that as operators we would be placed in a rank above that of the general workers. So for the first six months when we took part in classroom training, we considered ourselves pretty important people. The bubble burst when we were sent for training on the job.

We began to be treated as casual workers, asked to carry loads, sweep the floor and do other such humble jobs. The factory canteen had separate sections for workers and supervisory staff, tables and chairs for the staff and hard benches for the workers. We were directed to the 'workers' side' of the canteen, and so we came to know our place. About twelve trainees left half way through the training period, and although also disappointed, I could not quit since I came

from a poor family and could not afford to leave the job even if I wanted to.

During training, we were told about the hazardous nature of the chemicals stored, used and produced in the factory. We quickly learned of dangerous effects they could have on us. During on-the-job training in the Sirmet pilot plant, acid slurry fell on fellow trainee Achilles Gupta, resulting in intensive chemical burns. Another trainee, D.C. Mathur, became allergic to chemicals and suffered from a painful skin disease. Later he was transferred to Utilities where he died in 1982.

After some months, our training period was extended by six months and our stipend raised to Rs.300 (US $33.90) per month. By this time, we had realized that on completion of training, we would be placed on a hourly rate, and most of us had resolved not to stay in Carbide for long. Of course, our main reason for outrage at being given hourly status was loss of prestige and money, coupled with the loss of control over our workspace. Since then, I have learned that there is a connection between these personal concerns and our obligation to the community.

Workers cannot fulfill their responsibilities beyond their own workplace if they are continually threatened with termination. As long as they continue to do their jobs competently and conscientiously, job security must not be in question. Workers need the same tenure status as professors in universities. Professors have secure job status so that they are free to speak out for the protection and betterment of society. Workers have an even greater and more direct responsibility when they work in extremely hazardous industrial facilities. It is essential they be given job security. It must be emphasized that it is not only to serve the interests of individual workers but to enable them to carry out their responsibilities to the community.

On completion of our training in February 1977, we were absorbed as hourly rated workers, thus confirming our worst fears. I was assigned badge or token No 4121 and placed as a plant operator in the Phase II Sevin plant that started up in July 1977. In this plant, Sevin insecticide was produced from methyl isocyanate (MIC) and x-napthol. During our training, the plant was described in detail with the help of a model. I was rather awed by the sophisticated technology and apparent attention to safety matters that this plant was supposed to have. Things turned out differently when the plant started operating. In all systems of the plant – the MIC and x-napthol charging station, reaction system, filtration system, drying system, solvent

recovery system, packing system, vent gas scrubbing system and refrigeration system – design modifications were made in response to operational problems. Soon after the plant was started, supply lines started getting choked, control instruments failed and equipment turned out to have inadequate capacity. All these required substantial changes in order to build up and maintain production volumes. Safety appeared to be the last consideration. I thus learned the importance of looking beyond the public image that corporations try to present, especially regarding safety.

The modifications made in the x-napthol charging system are illustrative of Carbide's management approach. During our training, we were shown, through a model, the operations of the x-napthol charging system. It consisted of a jaw crusher that pulverized solid x-napthol. The pulverized x-napthol powder was then taken up by means of bucket elevators and dumped into a melting tank where it was melted through steam heating. Then the molten x-napthol was pumped through the charging lines into the reactor. On the model, the whole operation was pretty impressive and looked quite smooth and safe. In actual practice, the jaw crusher did not work properly, so x-napthol was crushed manually by contract workers who knew nothing about the damage x-napthol dust could cause to their liver and kidneys.

But there were more operational problems. The molten x-napthol began to solidify in the charging lines due to insufficient heating and then choked the valves, pumps and lines, necessitating frequent steam lancing. This went on for two months, after which the charging system was closed down.

Charging was made more 'direct' after this. Contract workers were employed to pound solid x-napthol with hammers in a shed specifically constructed for this purpose. Crushed x-napthol was carried to the MIC reactor vessel and charged manually through the manhole. An opening in the reactor vessel would lead to escape of MIC, carbon tetrachloride, trimethylamine, x-napthol and carbaryl dust. Thus, not only the casual workers but operators like myself were routinely exposed to these toxic chemicals. The casual and contract workers who performed the most hazardous tasks were not considered to be members of the workers' union and could be laid off at any time.

Once a casual worker in the process of charging x-napthol, accidentally dropped an empty sack containing pulverized x-napthol into the MIC reactor tank. Afraid that he would be punished for this error,

the worker lowered himself into the tank and was trying to lift the sack up with his feet when he was spotted by the plant supervisor. This incident was used to threaten termination of the services of Shyam Pancholi, the operator in charge, who was also a militant union activist. Pancholi resigned soon after, afraid of being fired, jeopardizing his future career. The casual worker was also laid off but no changes were made in the obviously hazardous procedure.

In the Sevin plant, most of the modifications from the original design consisted of changes from automatic and continuous to manual and batch processes. The solvent recovery system, for example, was designed for recovery of the carbon tetrachloride from the filtration and drying unit. In actual practice, recovery was grossly affected by choking problems. Due to impurities, carbon tetrachloride was formed as semi-solid tar that would cause choking in the rotary valve used to drain out the solvent (kettle product) at periodic intervals. To tackle this problem, the rotary valve was eventually replaced and the solvent was periodically drained out by manual prodding, a procedure that would often lead to the solvent spreading all over the shop floor. This and other similar modifications in plant plans led to more hazardous work conditions, poor recovery of solvents and leakage of chemicals, leading in turn to atmospheric pollution and inadequate control over the whole process of production.

Through the workers union, the problems that plant operators were having with pollution within the plant were raised with management. Letters were sent to the managers of the plant, as well as to the Ministry of Labor of the Government of Madhya Pradesh and the factory inspector. All our letters went unanswered, and we were advised by management that we would have to work under 'normal pollution levels.' However, in abnormal conditions (as when carbon tetrachloride leaks were heavy), the plant was closed down to await more bearable conditions.

Around this time, I began to suffer from problems of indigestion, acidity and a constant choking sensation in my throat. My co-workers too had similar problems, and quite a few of them started vomiting every time the pollution levels were high. Every six months we were examined by the factory doctor. Samples of our urine and blood were tested and chest x-rays were taken, but we were never given the reports of these examinations. Some of my co-workers, who by then had developed pronounced health problems, were shifted to the Utili-

ties section, and it was rumored that this was due to their adverse health test reports.

In 1978, there was a big fire in the factory. I was working in the Sevin plant on the first shift. As we were leaving at the end of the shift, I saw that all the four rear wheels of the factory fire truck had been taken off, with the vehicle resting on a jack. I commented to my co-workers about the possibility of a fire breaking out with the only fire truck out of commission. My friends thought the management was much too stingy to invest in another fire truck so that there would be at least one fire truck always in readiness, and our discussion ended with an ominous chant of 'anything can happen in this factory.'

When we reached Peer Gate about 3 km away from the factory, we saw fire trucks rushing in that direction. When we looked back, we saw smoke billowing out and returned to find out what was happening. There was a raging fire at the coke yard in the carbon monoxide plant and fire fighters from the municipal corporation, the airport and the BHEL factory battled to arrest its spread.

A huge crowd gathered around the factory to watch the fire, as any crowd watches a sensational event. The fire continued until midnight, when most of the material was burnt out. The newspapers the next day carried a full account of the fire, saying that the x-napthol kept in the coke yard had caught fire.

When I went to work the following day, a number of police officials were moving around investigating the fire. A fellow worker reported that x-napthol worth Rs.6 crore (Rs.60 million or US$7.3 million) had been burnt up but, oddly enough, the factory bosses showed no sense of loss. They did not seem to care. Contrary to what had been reported, I gathered that napthalene was also stored in the coke yard and not only x-napthol. Many workers also wondered why napthalene (or even x-napthol) should be stored in a place that was exclusively meant for storage of petroleum coke, particularly when there existed storage facilities for specific raw materials.

There was a strong suspicion among the workers that the fire was deliberately started by the bosses. It was rumored that management was not being allowed by the government to import x-napthol. Given that the x-napthol plant was not being run successfully, this was the only way management could create a situation to make a case for the import of x-napthol. Most workers held that the fire was

set up to circumvent the import restrictions of x-napthol laid down by the Government. The newspapers gave a lot of coverage to the fire, pointing out the potential hazards of such a factory sited in the middle of dense human settlement. Neither factory management nor government officials came out with a report on the fire; no one was held responsible, and most of the sensation died down in a week. By that time, Carbide bosses were throwing parties at the posh hotels of the city to thank Government officials, city corporation officers and journalists for their cooperation in managing the fire.

Later in 1978, the Sevin plant was closed down for six months and I was shifted to the x-napthol plant that had recently begun operation. Here again, a lot of modifications in the plant design were made in an effort to cope with frequent choking of the lines and improper quality control of the final product, leading to increases in production costs. The overall impact of these modifications was once again a shift from continuous and automatic to manual and batch processes. The plant experienced a bad start, an even worse run and finally closed down in 1982.

2

Joining the MIC Unit

IN 1979, I returned to the Sevin plant after it was restarted following some modifications. I stayed there until 1982 when I was transferred to the MIC plant along with two other co-workers. It was rather surprising because to be an operator in the MIC plant, one had to be either a graduate in science or hold a diploma in mechanical or chemical engineering. Among us workers, it was known that the MIC plant was the most dangerous, and yet MIC plant operator jobs were coveted ones yielding higher grades and better salaries. So it was with mixed feelings that the three of us accepted our new posts. But we were assured by the managers that we would be given six-months' training before we were put on the job, which helped matters.

Training began on 12 March 1982. For one week, it was classroom preparation and then on-the-job training for one month. At the end of five weeks, the plant supervisor asked me to take charge as a full-fledged plant operator. I refused to do this, insisting on the promised six-months' training as I felt quite ill-prepared to handle a plant known for its complexities and dangers. Furious at my refusal to take orders, the plant supervisor complained about me to the superintendent of the MIC plant, then the manager of industrial relations.

During my transfer to the MIC plant, I was given a letter mentioning a minimum training period of six months, so when the manager of industrial relations, D.S. Pandey, called me in, I showed him the letter. Two more officials, safety manager B. S. Rajpurohit and another plant official, K. D. Ballal, joined Pandey and the three of

them tried to convince me that I was being unreasonable in insisting on further training. Since I had been working for six years in a chemical factory, that was enough experience and further training was unnecessary. But I stood my ground and flashed the letter before them as often as I could. Finally, it was resolved that I would be given three weeks of training for handling the storage unit of the MIC plant and then I would be in sole charge of the storage unit. So in June 1982, I took over as operator in charge of the storage unit in the MIC plant.

Work in the storage unit consisted of the transfer of MIC from the storage tank to the Sevin plant and the unloading, transfer and storage of chlorine, monomethylamine and chloroform, all of which were brought from outside the factory. While working in the Sevin plant, I had on many occasions been told about the advanced technology and the efficient crew of operators in the MIC plant. But, after joining, I witnessed a steady decline in the quality of personnel with more and more untrained staff hired in each category. They worked as regular operators but without proper qualifications and training.

One of the reasons for this state of affairs was the unfair treatment of some personnel. In the matter of promotions, individuals with little experience but with unquestioning loyalty to the bosses were invariably selected over others. For example, K. D. Ballal, with 23 years working experience in Carbide plants behind him, was not selected for promotion to a higher level position, while others with far less experience fared much better. S. P. Choudhury joined the Carbide Bhopal plant in 1980 as a MIC plant superintendent in charge of one shift. By 1982, Choudhury had been promoted to production superintendent of the entire Sevin unit. This, many alleged, was due to his smart 'handling' of the death of a maintenance worker, Ashraf Lala, in December 1981. Choudhury was the plant superintendent at the time Ashraf died of phosgene inhalation. Further, in 1983, Choudhury was made manager of both the Sevin and MIC plants after K. D. Ballal resigned from the post of MIC Plant Manager and left Union Carbide. With one exception, no plant operator was ever promoted at the Carbide factory, although some had worked there for more than ten years.

Unlike the Sevin plant, most of the equipment and vital instruments of the MIC plant were imported from the United States. Senior plant personnel had been given training in the Institute plant in West Virginia. We were told that the MIC plant in Bhopal was based on

twenty years of experience at the Institute plant and that nothing could go wrong. But early on, I came to know of modifications made in the MIC plant similar to those I had witnessed in the Sevin plant – modifications made essentially to cut costs. The pilot flame in the flare tower was lighted only when the carbon monoxide plant was running, and alternate arrangements for using liquid petroleum gas were haphazardly made. This, of course, was a serious breach of safety procedures.

In the same manner, the refrigeration plant was not kept running all the time, as had been stipulated in the Union Carbide manual on methyl isocyanate (UCC 1976,7), and MIC was chilled only as it was poured into drums (meant for transport to the Temik plant) to cut down on evaporation losses. As operators in the MIC plant, we also had to cope with corroded lines, malfunctioning valves, faulty indicators and the absence of some key control instruments. Continuous monitoring of the temperature of MIC in the tank was crucial for safety reasons, but the temperature indicator alarm never functioned properly and the temperature of MIC was not recorded on the log sheets.

As part of the economy drive that had been sweeping through the plant for some time, and to cut down on caustic soda losses, the caustic soda feed to the vent gas scrubber was modified into a batch process, from the continuous process originally designed. The economy drive also meant that malfunctioning valves were not replaced, faulty gauges were not repaired and process monitoring was done inadequately. The economy drive had serious consequences on the lives and health of the workers and, ultimately, on the entire city of Bhopal.

The serious accident that I have referred to earlier occurred on 26 December 1981. Ashraf Lala, a maintenance worker, was fatally exposed to phosgene while working on a phosgene line. All the valves had been closed, the phosgene had been purged out and slip blinds inserted near the valves. Ashraf and his coworkers were repairing the phosgene vaporizer. Work had been going on for two days and, once it was over, Ashraf removed the slip blinds, a normal procedure, to get the vaporizer back into operation. Suddenly, he was splashed with liquid phosgene from the line. This could only happen if there was a malfunctioning valve along the line and possibly there were several. The shower of phosgene must have been alarming, for Ashraf, in a panic, ripped off the mask he was wearing, thus inhaling

a large amount of phosgene gas evaporating from his clothes. He was taken to the factory dispensary and from there to the Hamidia Hospital, where he died after 72 hours.

The managers blamed Ashraf for removing his mask, thus bringing about his own death. The workers' union put the blame squarely on the company management. We pointed out that it was the malfunctioning valve that led to the accident, that Ashraf should have been informed about the possibility of such an occurrence and, further, that he should have been provided with PVC overalls.

Ashraf's death precipitated the feeling of fear and anxiety that had been growing among us. While the reaction to Ashraf's death was still at its peak, another incident occurred on 9 January 1982. During the night shift, a valve in the phosgene line in the MIC plant broke off and thick clouds of deadly phosgene leaked out. Workers in the MIC and Sevin plant ran away in panic and soon the rest of the workers in the factory joined them. Working in the Sevin plant at the time, I ran out to the fields behind the factory and returned to the factory in the morning. Twenty-four workers, who were exposed to phosgene, had to be admitted to the hospital that night.

In January of 1982, the workers' unions began to agitate for safer working conditions. We carried our campaign to the community around the factory trying to make them aware of the hazards posed by the factory. Fliers were printed, rallies organized and public meetings held at the factory gate. After two weeks of such activities, we were told by government officials that a committee should be set up to investigate matters related to Ashraf's death. Meanwhile, our attempts to inform the community were met with such indifference that we soon gave up.

I wondered over the indifference of the community toward an issue of such immense relevance to their lives. It was quite plain that the people in the community were suspicious of the workers; they suspected that the workers were whipping up community support with an eye to getting a better deal for themselves.

There was another reason for community noninvolvement: apart from the residential colonies which had been there for hundreds of years, there were a few communities where a number of people were living without paper land deeds or 'pattas'. Quite aware of their powerlessness vis-à-vis a global corporation like Union Carbide, these people were afraid that if they joined the workers in their demand

for closing down, or even shifting the factory to another site, the government might instead drive them away from their homes.

The protests of January 1982, growing around the issue of safer work conditions, were supported by almost every worker. Most had experienced frequent encounters with unsafe work conditions and Ashraf's death had shaken everyone up. Yet we carried on. The lack of support from the community only added to the apprehensions of some workers. They were afraid that the company might close down the plant as a response. Around the same time, factory management terminated the service of two workers, Sharad Shandilye and Bashaerullah, the most active union leaders who played key roles in all the protests and negotiations. The final blow, all agitation fizzled out before gaining real momentum.

The workers' protest of 19 January 1982 and its disappointing results brought about a change in union response to the unsafe conditions in the factory. While earlier, the unions had concerned themselves with unsafe plant designs and work procedures, the emphasis shifted to personnel safety after January 1982. Prior to and in the immediate aftermath of Ashraf's death, the unions asked for design modification or even shifting the plant to ensure safety for the neighboring communities and workers. The later demands focused on the supply of safety equipment for individual workers. The potential danger to all workers and surrounding neighborhoods was thus downgraded in relation to the need to protect individual workers.

Around the same time, the management set up a safety committee within the factory in which workers' representatives were included. The safety committee, however, deliberated on the supply and fixation of quotas for gloves masks and overalls and kept away from the more fundamental issues of unsafe working conditions, plant operating procedures and design modifications. The removal of two of the most vocal union leaders by management led to a comparative softening of the union's stance on safety issues. The negotiations between the management and the union in 1983 were marked by the absence of any agitational activity. This was quite unlike earlier years. The chief results of the 1983 negotiations were the introduction of a five-day work week, 'rationalization' of workers to reduce manning levels and a raise in salary to make all this palatable. As part of the rationalization program, a voluntary retirement plan was introduced and some thirty workers left the factory.

The introduction of a five-day week in the factory brought about quite a few changes. While earlier, maintenance jobs were done in all three shifts around the clock, the introduction of five-day week coupled with job rationalization meant that major maintenance jobs could only be performed in the general shift during the five-day work week. It also meant that for two days, work in the plants was comparatively less supervised.

The rationalization of workers even extended to the safety crew within the factory. Prior to 1983, there were two groups of workers trained to respond to accidental situations – the fire squad and the rescue squad. After the 1983 negotiations, both were merged into the emergency squad, resulting in fewer workers. The quality of personnel in the squad was also affected. This downgrading of the safety squad took place as accidents continued to occur with alarming frequency.

On the night shift of 5 October 1982, MIC, methylcarbaryl chloride, chloroform and hydrochloric acid began leaking from a joint in the pyrolizer transfer line. Since the joint did not have a gasket, it gave way upon the transfer of these materials. As the gas plume moved toward the nearby settlements, people ran away in panic. The gases also seeped into the residence of an inspector general who lodged a complaint with the police, whose response was to go to the factory to make an inquiry. They were told by management, however, that all was under control. The MIC supervisor, V. N. Aggarwal, in attempting to stop the leak suffered intensive chemical burns. Two other workers were also severely exposed to the gases. Mr. Aggarwal remained in the hospital for two months and subsequently left the company.

Many other leaks also took place in the MIC plant in 1983 and 1984. MIC, chlorine, monomethylamine, phosgene, carbon tetrachloride, and occasionally a combination thereof, leaked with frightening regularity. Workers would hurriedly leave and all work would stop for some time. Injuries suffered during these leaks were treated at the plant dispensary, with incidents usually recorded as cases of material loss rather than injuries to workers.

3

3 December 1984

ON THE NIGHT of 2 December 1984, I was at home asleep with my wife and two small children. I first knew there was a problem when fumes of white gas filled the house and we began to choke. The gas itself announced its presence, not any alarm system or public announcement. When our choking continued to increase and our eyes began to burn, I decided that we must leave. Outside there was total hysteria. As I did not own a vehicle, we traveled by foot; my wife was carrying our son and I was carrying our daughter.

We headed toward New Market, away from the gas cloud. Soon my biggest concern was not the effects of the gas but the possibility of being trampled. The streets were full of fleeing people; unable to breath and vomiting, they continued to run. Families were separated, old people and children abandoned. Like many others, we got a lift in a car going toward New Bhopal, where a friend could give us a place to stay. Others got lifts to unknown places on the outskirts of the city and beyond. They arrived sick and afraid, without any money and often alone without family members or friends.

Information on what was happening was only available from those fleeing the gas. As much as two hours after the leak, the gas reached places distant from the plant. Although the people could have been evacuated, government officials and Union Carbide were already behaving as though they more interested in covering up the disaster than in saving lives. In contrast, once the hysteria died down, the efforts of ordinary people to help each other were astounding.

Nonetheless, the misery endured in those first few hours after the leak, was more than anyone could have imagined possible.

Parents watched their children die; children watched their parents die. The immediate effects of the gas were excruciating pain and a real fear of the long-term consequences. People were blinded, breathless and continually vomitting. No one knew how long these symptoms would last. Only I would we know that much of the lung damage was permanent, that the toxins permanently damaged the body's immune system and that no research was available to tell us if long-term effects would include cancer and birth defects.

Meanwhile, Union Carbide was already trying to play down the effects of the leak. Union Carbide medical officers notified the hospitals that MIC was like tear gas: it caused only temporary injury and could be treated with oxygen, antacids by flushing the eyes with water. They said all this despite fact that the company manual clearly stated that exposure to MIC is deadly in large doses and that even small doses would cause serious pulmonary damage.

Soon it became apparent that not only was Union Carbide trying to stage a cover-up, Government officials, knowing they were partly responsible and already shirking in their duty to provide relief, were also now making efforts to conceal the magnitude of the disaster. The police came around announcing there had been a gas leak from the Union Carbide factory, that all was now clear and people should return to their homes. We later learned that even days after the disaster it was not known whether toxins remained in the environment. Without bothering to verify the facts, the police wanted to appease the superiors, not help the victims.

When daylight finally came, the devastation was clear to all. Dead bodies of humans and animals littered the streets, vegetation was yellowed and wilted and the cries of the living filled the air. Daylight made the tragedy dramatically visible to all. But rather than providing relief, government officials began a concentrated effort to hide the extent of damage by dumping bodies in the river and into mass graves. In their haste, they often threw the living in with the dead. I have heard many stories of people regaining consciousness after hitting the cold water of the river. No one knows how many people were buried alive.

Also as part of their cover-up, officials failed to take any action against continued exposure. No evacuation efforts were made, de-

spite it not being clear whether toxins remained in the air. Further, while it was obvious that vegetation had been affected by the toxic chemicals, no provisions were made to supply uncontaminated food from outside. Radio announcements assured us that food and water in Bhopal were safe yet we knew that trucks were bringing in special provisions for high-ranking officials.

The MIC facility included the large storage tanks, one of which (E S610) spewed its deadly contents on the people of Bhopal on the night of 2–3 December. 'Operation Faith', to dispose of the remaining MIC gas in storage tanks 611 and 619, began on 16 December. The operation included expert scientists from the Government of India along with experts from UCC and UCIL.

From the beginning of the operation, precautions were taken to avoid further contamination of the tanks. In case of a leak, steps were taken to inform the public and to evacuate them. All safety devices were put into action; there were even standby helicopters to spray water over the factory to neutralize any escaped gas. A running radio commentary was given by the local station of All India Radio. But it all seemed a show, with priority given to the appearance, not the reality of safety.

Government propaganda was in full swing prior to 16 December, asking people not to leave the city and assuring us that every precaution had been taken to prevent any eventuality. But the people had already lost faith in the government, not to mention Union Carbide officials. Almost all of the residents of old Bhopal fled the city, leaving only the government officials who remained to demonstrate their faith in this exercise. The exodus contained most of the victims already severely exposed to the gas. The government's failure to convince the people about the safety of Operation Faith resulted in a loss of critical treatment for many of the victims during the time they remained away from Bhopal.

I watched this tragedy with increasing anger, especially since I knew that the failures of both the government and Union Carbide had begun long before the actual occurrence of the leak. If people had been educated about the effects of MIC, far fewer would have suffered and died. Simply covering one's face with a wet towel can significantly reduce exposure. Carbide never told this to the people of Bhopal, partly due negligence and partly due to a long history of denying that their operations were hazardous.

4

What Really Happened

THE CAUSE OF the Bhopal tragedy can only be determined through assessment of the observations made by those in the plant in the critical hours preceding the MIC leak. Any assessment will be shaped by the interests of those conducting it. Carbide's attempts to describe the cause of the tragedy have not been in the interest of truth but in the concealment of their liability. Thus, in their 'sabotage theory', Carbide blames workers for the disaster and avoids addressing plant conditions or negligent operation. In contrast, independent research institutes and journalists have described the cause of the disaster as a 'water-washing theory' that deeply implicates Union Carbide for faulty plant design, negligent operations and poor personnel training. These independent assessments have been based on interviews with workers and others most familiar with the real circumstances surrounding the disaster. In this chapter, the water-washing theory will be examined, and sources through which those workers directly involved arrived at their conclusions, referenced.

The most basic source of the water-washing theory is Carbide's own description of the properties of MIC and the requirements for handling it.

The following descriptions come from Union Carbide manuals:

> Methyl isocyanate (MIC) is reactive, toxic, volatile and flammable. It is usually stored and handled in stainless steel.... Fluoro-carbon resin ... is used in packing and seals and in lining pipes. Any other

material may be unsuitable and, possibly, dangerous. Do not use iron or steel, aluminum, zinc or galvanized iron, copper or tin or their alloys.... (UCC 1976, 9)*

Iron, copper, tin and zinc must be excluded from contact with methyl isocyanate. They catalyze a dangerously rapid trimerization. The induction period varies from several hours to several days. The heat evolved can generate a reaction of explosive violence.... (UCC 1976, 9)

Water reacts with methyl isocyanate. . . . The length of the 'induction period' decreases with increasing temperature. At 6 °C, for example, with methyl isocyanate and water phases in contact, a runaway reaction has occurred after 67 hours; at 20 °C, it has occurred after 23 hours.... (UCIL 1978, 166–67)

Under conditions of catalysis, methyl isocyanate will form a crystalline trimer or a high molecular weight resin. The reaction is highly exothermic and will proceed slowly or rapidly, depending on the catalyst. Sodium alkoxides ... cause rapid trimerization. Ferric chloride, tin chlorides and cuprous chloride cause rapid trimerization after an induction period of several hours .... (UCC 1976, 9)

ACTIVITY OF TRIMERIZATION CATALYSTS

Catalyst (1 to 3% in MIC)	*Time required for complete trimerization*
$NaOCH_3$ (sodium compounds)	10 minutes
FeCl3 (iron compounds)	1 hour

—(UCC 1976, 23)

Confine methyl isocyanate within closed equipment. Blanket the vapor space of tanks and reactors with dry nitrogen. Exclude materials that might catalyze reactions.... (UCC 1976, 1)

For safety reasons, size the tanks twice the volume required for storage. Use the added volume, in an emergency, for space to add inert diluent as a heat sink; addition of a diluent will not stop a reaction but will provide more time to control the problem. As an alternative, keep an empty tank available at all times ....(UCC 1976, 7)

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* See list of references at p.88

> Cool a storage tank by coils on the outside walls of the tank. Alternatively, circulate methyl isocyanate through a heat exchanger designed so that no coolant can leak into the methyl isocyanate. Select a coolant that will not react with methyl isocyanate nor catalyze a reaction.... (UCC 1976, 7)

> Maintain a tank's temperature below 15 °C and preferably at about 0 °C. Equip a storage tank with dual temperature indicators that will sound an alarm and flash warning lights if the temperature of the stored material rises abnormally.... (UCC 1976, 7)

> Thermal decomposition [of MIC] may produce hydrogen cyanide, nitrogen oxides, carbon monoxide and/or carbon dioxide. (UCC 1976, 27)

These excerpts are from Union Carbide's own manuals describing the characteristics of MIC. Yet, in the operation of the Bhopal MIC unit, the warnings were ignored. The Central Bureau of Investigation's report on the events preceding the disaster documents the facts:

> Investigation has disclosed that at the time when the incident took place there were three partially buried tanks in the factory at Bhopal. These were numbered E 610, E 611 and E 619. MIC was being stored generally in the tanks E 610 and E 611. E 619 was supposed to be the standby tank [available for transfer of MIC on occasions of emergency]. In the normal running of the factory, MIC from E 610 and E 611 was being transferred to the Sevin plant through stainless steel pipe lines. MIC is kept under pressure by nitrogen which is supplied by a carbon steel header common to all the storage tanks. There is a strainer in the nitrogen line. Subsequent to the strainer the pipe is of carbon steel and leads to makeup control valve, which also has a body of carbon steel. These carbon steel parts could get exposed to MIC vapors and get corroded, providing a source of contaminant which could enter the MIC storage tank and cause dangerous reactions. (CBI 1987, 4)

> Investigation has shown that the PVH and RVVH pipe lines as well as the valves therein were of carbon steel. Besides, on account of design defect, these lines also allowed backflow of the alkali solution from the VGS to travel up to the MIC tanks.... (CBI 1987, 5)

> The refrigeration system that had been provided was inadequate and inefficient. No alternative standby system was provided ... The temperature of the MIC tanks [was not maintained] at the preferred

temperature of 0 °C but at ambient temperatures, which were much higher. (CBI 1987, 6)

A very essential requirement was that the MIC tanks in the factory had to be kept under pressure of the order of 1 kg/cm^{2}g by using nitrogen, a gas that does not react with MIC. However, MIC in tank 610 was stored under nearly atmospheric pressure from 22 October, 1984 and attempts to pressurize it on 30 November and on 1 December 1984 failed. The design of the plant ought not have allowed such a contingency to happen at all. The tank being nearly under atmospheric pressure, free passage was available for the entry of backflow of the solution from the VGS into the tank. (CBI 1987, 5)

The first indication of any reaction in the tanks come through the pressure and temperature indicators. The thermowell and temperature transmitting lines were out of order throughout and no temperature was being recorded for quite sometime. Pressure was also being recorded at the end of each shift of eight hours duration instead of every two hours as was being done earlier.

On 2 December, 1984 before 10:45 p.m. [the end of the second shift], no deviation was noticed in the pressure of tank 610. Soon thereafter, in the night shift, some operators noticed leakage of water and gases from the MIC structure and they informed the Control Room. The Control Room operator saw that the pressure had suddenly gone up in tank 610. Some staff in the III shift ... checked the pressure indicators on tank 610 and found that the pressure had gone out of range. The factory staff tried to control the situation but they failed. Even tank 619, which had to be kept empty for emergency transfers, was found to contain MIC and therefore when the reaction started, transfer thereto from tank 610 was not possible. (CBI 1987, 5)

The VGS that had been provided in the design was capable of neutralizing only 13 tons of MIC per hour and proved totally inadequate to neutralize the large quantities of MIC that escaped from tank 610. When the two tanks (610 and 611) themselves had been designed for storing a total of about 90 tons of MIC, proportionately large capacity VGS should have been furnished ... (CBI 1987, 6)

From these facts, workers and other experts have arrived at the water-washing theory as the cause of the Bhopal disaster. This theory

concludes that the cause of the disaster was a toxic gas leak caused by an exothermic reaction set in motion when stored MIC was contaminated with water, iron rust, sodium and chloride compounds. The water was from a water-washing exercise intended to clear blocked pipes in the Relief Valve Vent Header (RVVH) piping configuration.

The water-washing exercise began at 8.30 p.m. on 2 December, and continued until fifteen minutes after midnight on 3 December. The order was given to begin the exercise without instructions to place slip binds in the lines being washed so that water could not pass into connecting lines. Because the lines being washed were choked with solid chemical compounds, the input of water was more than the output from the bleeders. The excess water backed up and flowed passed an isolation valve (#19, fig. C), which should have been slip-binded. Because tank 610 was not holding pressure, the water was then able to pass the pressure control valve (#15 in fig. B) into the tank.

Carried with the water flowing into tank 610 were iron rust filings from corroding pipe walls, residue of the salt compounds that had blocked the lines being washed, and other contaminants. The entry of water plus contaminants into the MIC storage tank set off an exothermic reaction which caused catalytic trimerization.

Mixing water with MIC alone would have caused a similar reaction but over a much more extended time span. At ambient temperature (20 °C), a violent reaction would have taken 23 hours to occur. Iron rust and other contaminants, such as chloride and sodium compounds, were carried with the water, This resulted in a catalytic trimerization (a runaway reaction), causing a massive rise in pressure and temperature over a short time span. The result was the release of the tank's contents through various outlets into the atmosphere.

The route of the water can be traced on the diagrams shown as figures A, B and C at the end of this chapter. Water was inputted at a bleeder connection (#17 in fig. C) on the relief valve vent line. Solid chemical compounds blocked the pipe at points (#21 in fig. C) downstream of the safety valves. Water thus backed up and flowed past the RVVH isolation valve (#19 in fig. C). While this valve was tagged 'closed', it was not slip-bound to ensure positive isolation. The water then passed through a jumper connection (#5 in fig. B) into the Pro-

cess Vent Header (PVH) (#3 in fig. B). The jumper connection was a design modification made in 1983 to allow alternative use of these lines during maintenance or in an emergency. The water then passed through the pressure control valve (#15 in fig. B).

Because the water was contaminated with iron rust and sodium and iron compounds, it took approximately one and half hours for the water-washing procedure to fill vent header in the MIC unit and reach the storage tank. (Complete trimerization occurred very rapidly within three and a half hours – 10:00 p.m. to 1:30 a.m.) It is possible that trimerization did not even take this long since the tank was at ambient temperature, instead of at very low temperature, as it should have been. Trimerization caused a runaway, exothermic reaction and a rapid increase in pressure. This process began sometime around 10:00 p.m. Around 11:00 p.m., MIC was first reported to be leaking into the atmosphere and the control room operator noticed a pressure rise from 2 to 10 psi. Around 12:15 a.m., field operators reported that a mixture of MIC and water continued to leak from the RVVH line. Supervisors described the leak as 'normal' and initiated no action other than ordering a water spray onto the leaking point.

Properly trained supervisors would have known what action to take at this stage. However, because the tank was filled to 80 percent of its capacity it would not have been possible to add an inert diluent such as a heat sink, thus slowing down the reaction. Moreover, there were no facilities for providing a heat sink. Since standby tank 619 also contained MIC it was not possible to transfer the contents of tank 610. The supervisors could only have anticipated a mass emission of MIC and thus initiated an evacuation of the plant and surrounding communities. Since no evacuation plan was in place, this effort would have been chaotic but nonetheless could have saved many lives. By 12:15 a.m., the pressure reading on tank 610 was 30 psi. Within moments, the pressure exceeded the scale at 55 psi. Around 12:30 a.m. the concrete casing of tank 610 split and both the rupture disk and safety valve popped. The bulk of the contents of tank 610 was then released.

Upto 40 psi, the gas was routed through the process vent line (#4 in figure B), through the PVH (#3 in figure B) and through the jumper connection (#5 in figure B) into the RVVH (#2 in figure B). The gas then escaped through either the atmospheric or overflow lines of the dysfunctional vent gas scrubber (VGS). After pressure rose above 40

psi, the rupture disk broke and then the safety valve popped, releasing the gas to the RVVH and on to the VGS.

The VGS was built to handle a flow of 189 lbs per hour at a maximum pressure of 15 psi. In the morning hours of 3 December 1984, gas flowed through the VGS at 40,000 lbs per hour at a pressure of 180 psi.

The main technical reasons for water along with catalysts entering tank 610 are the following:

1. Tank 610 was not holding pressure since 22 October 1984. (The other two MIC storage tanks – 611 and 619 – were holding pressure. Hence the water did not enter those two tanks.) This indicated that the blow down valve (#15 in figure B) was leaking badly.

2. The RVVH isolation valve (#19 in figure C) was partially open and malfunctioning. A slip bind was not provide and it was physically impossible to confirm if the valve was fully closed.

3. Branches of the pipeline (#21 in figure C) were badly choked.

4. All vent lines were made of carbon steel and handling corrosive substances, which resulted in contaminants being flushed into tank 610.

5. The height of the storage tank and connecting vent header was lower than the vent header in the MIC plant structure (figure A).

This theory is substantiated by Union Carbide's own account of the progression of events from the beginning of the second shift on 2 December 1984. The timings listed below in no way conflict with the Carbide report:

8:30 p.m.. Water washing of lines begins.

10:00 p.m. Approximate time water entered tank 610. Reaction begins.

10:20 p.m. Pressure of tank 610 noted as 2 psi in regular parameter reading at end of evening shift. 2 psi was a standard reading for tank 610.

11:00 p.m. MIC leak first reported by field operator in area near vent gas scrubber. Pressure of tank 610 was noted to be 10 psi by the control room operator. Slow leak to the atmosphere begins through the vent gas scrubber via the jumper connection between the PVH

and RVVH. Field worker reports MIC leak near the vent gas scrubber and process filters. The source of the leak is not known at this time.

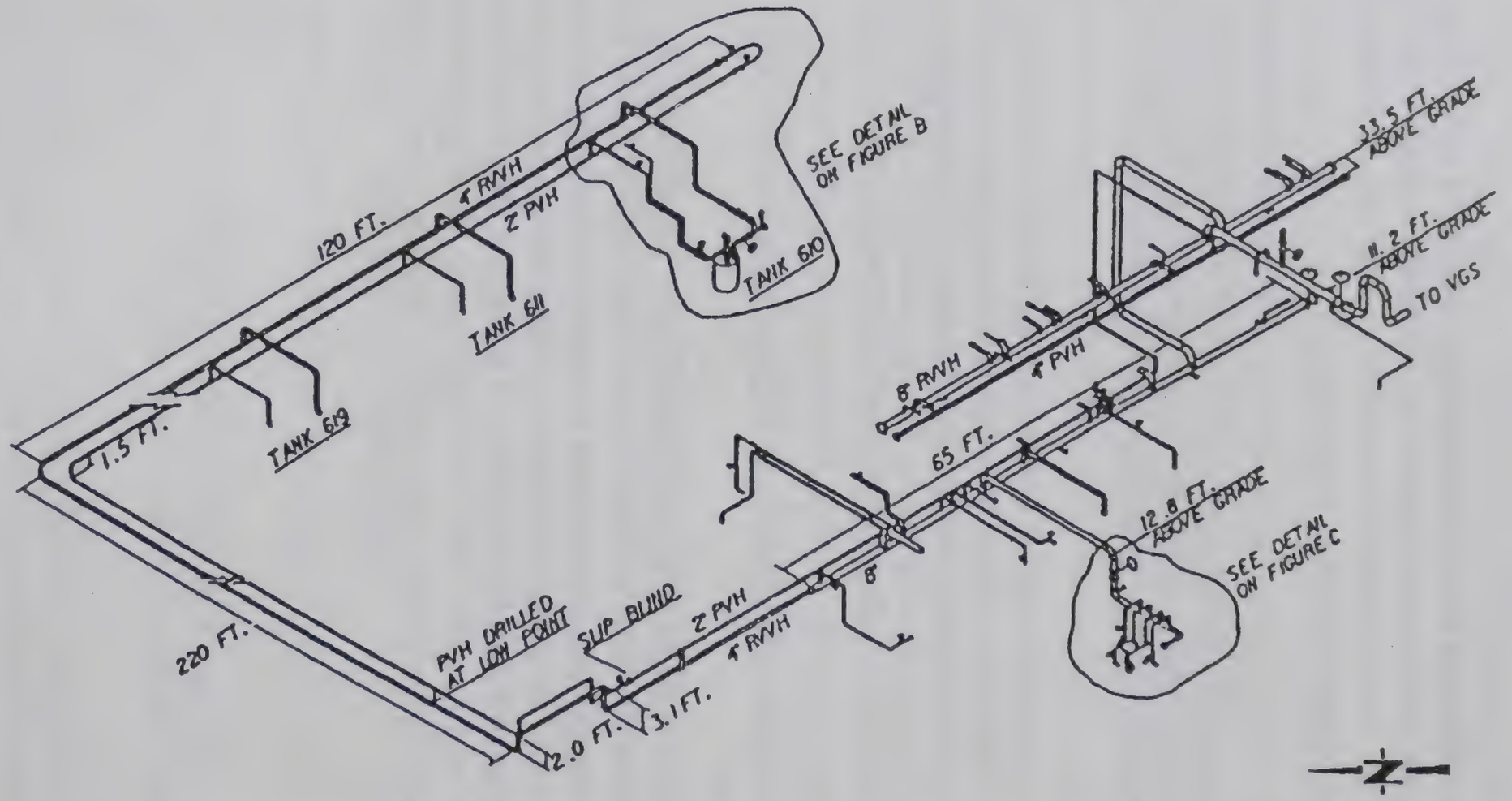
11:30 p.m. Operators notice water leaking along with MIC in the MIC process area. Gas first noticed by residents in colonies surrounding the plant. The leak is considered 'normal' and no inquiry is made with plant officials or the police.

12:15 a.m. Field operator reports continued release of both water and MIC in the MIC process area. The tank pressure reading is noted to be 30 psi and rapidly rising. Within moments, the pressure reading exceeded 55 psi, the top of the scale. Water washing of lines is stopped.

12:30 a.m. Tank 610 shows a noticeable heat increase and begins making a rumbling sound. The concrete casing of the tank then splits due to expansion of the tank walls caused by the increase in pressure. The rupture disk breaks, safety valves for tank 610 pop and the bulk of the tank contents is released though the vent gas scrubber.

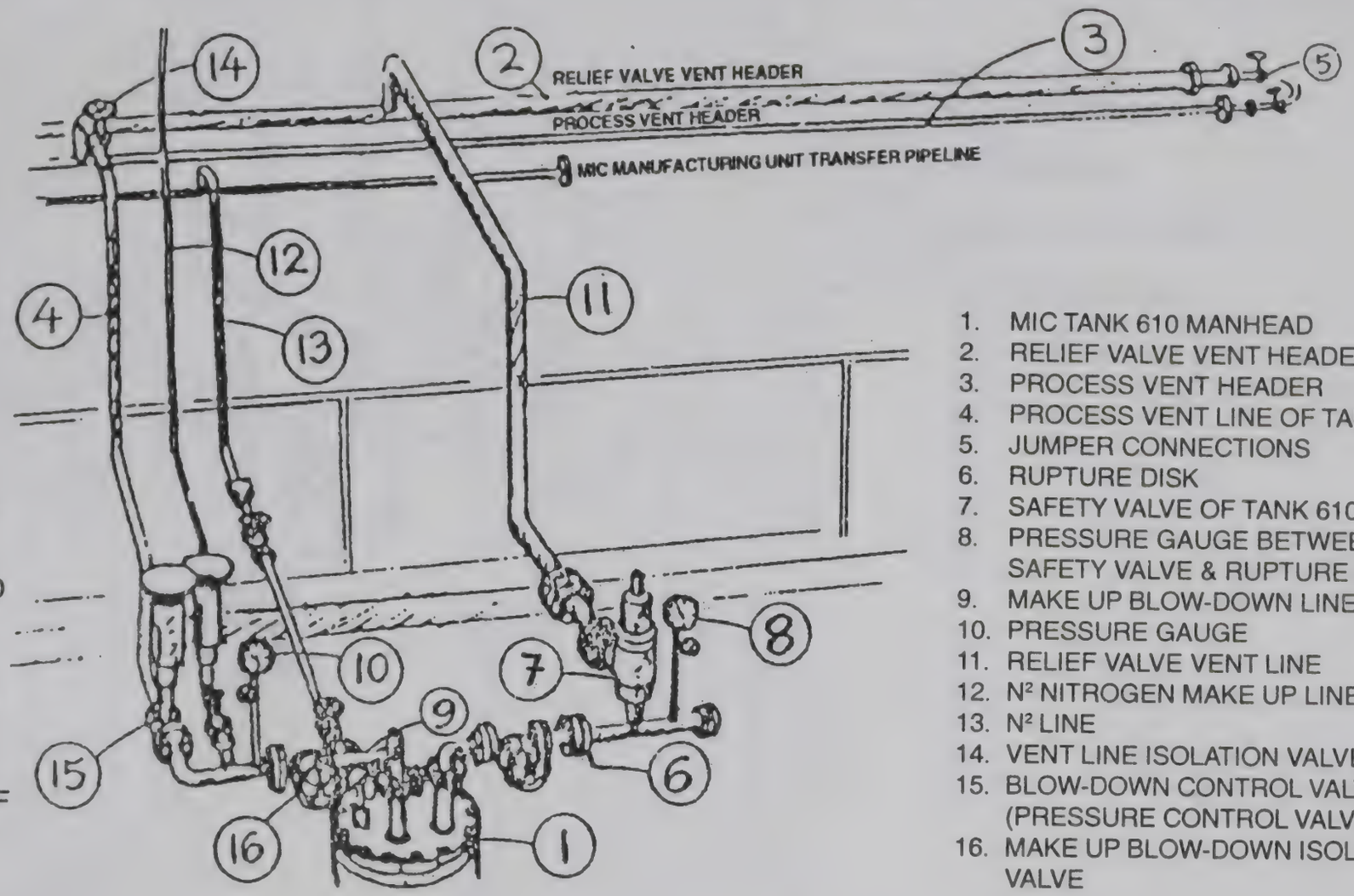
12:50 a.m. Alarm begins inside factory, alerting workers to a hazardous leak.

The facts recorded in Carbide's own report substantiate the water-washing theory. Yet, Carbide has continually denied this theory because it so deeply implicates them for faulty plant design and negligent operation. They do not want to admit that there were inadequate safety standards and systems in the plant and thus deny all theories that expose their use of defective parts, flawed design and poorly trained personnel. My own experience shows how important this exposure is.



Source: A.S. Kalelkar, Investigation of Large-Magnitude Incidents: Bhopal as a case study (I. C. E. S. Series No. 110). 1987

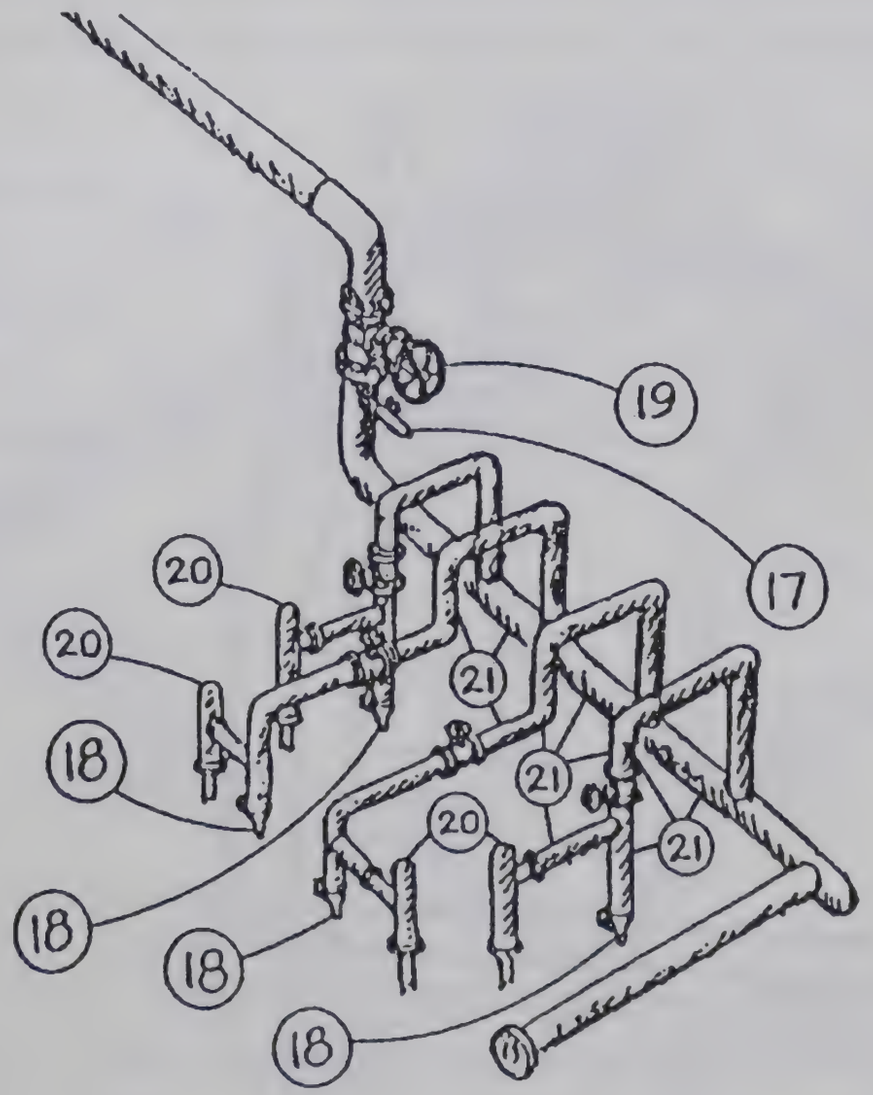
FIGURE A: PVH AND RVVH PIPING CONFIGURATION



ARRANGEMENT OF PERTINENT PORTIONS OF MANHEAD OF TANK 610 AND PIPELINES FROM NITROGEN HEADER AND PIPELINES TO PROCESS VENT HEADER AND RELIEF VALVE VENT HEADER

1. MIC TANK 610 MANHEAD
2. RELIEF VALVE VENT HEADER
3. PROCESS VENT HEADER
4. PROCESS VENT LINE OF TANK 610
5. JUMPER CONNECTIONS
6. RUPTURE DISK
7. SAFETY VALVE OF TANK 610
8. PRESSURE GAUGE BETWEEN SAFETY VALVE & RUPTURE DISK
9. MAKE UP BLOW-DOWN LINE
10. PRESSURE GAUGE
11. RELIEF VALVE VENT LINE
12. N^2 NITROGEN MAKE UP LINE
13. N^2 LINE
14. VENT LINE ISOLATION VALVE
15. BLOW-DOWN CONTROL VALVE (PRESSURE CONTROL VALVE)
16. MAKE UP BLOW-DOWN ISOLATION VALVE

FIGURE B: PIPING DETAIL—TANK 610 MANHEAD AREA



17. BLEEDER CONNECTION FOR WASHING
18. BLEEDERS OF LINES THAT WERE WASHED
19. RVVH ISOLATION VALVE
20. SAFETY VALVE
21. CHOKED BRANCHES OF PIPELINES THAT WERE WASHED

FIGURE C: PIPING DETAIL—WATER-WASHING AREA

5

Causes of the Bhopal Tragedy

THE BEST WAY to expose the manifest impossibility of Carbide's sabotage theory is to relate the history of negligence that led to the disaster. Carbide fully understood the hazardous nature of MIC. Their 'Material Safety Data Sheet' (included in UCC 1976) describes MIC as reactive, toxic, volatile and flammable, a poison by inhalation, and also an oral and contact poison. Yet, the Bhopal plant design and operation indicated widespread disregard for the serious consequences of mishandling. The most obvious inadequacies are described below.

Problems with plant design

1. There are several ways of manufacturing Sevin (the end product of which MIC was a component) without using MIC. Carbide used these alternatives between 1958 and 1973. It switched to MIC on grounds of savings. Carbide knew that the MIC method it adopted was much riskier. The particular process chosen involved large-scale storage of MIC. Yet, there is a known 'closed loop' process in which MIC is converted into carbaryl (the end product) as soon as it is manufactured. Carbide considered using the 'closed loop' by studying the process used by Bayer Corporation, but decided that it would be more expensive. Even Carbide's Indian management objected to large-scale storage but they were overruled by higher-ups in the parent company.

2. In Bhopal, there was no measure for continuous check of the purity of MIC. In case of failure in the final refining process, off-grade

MIC would be mixed with previously stored material, introducing large-scale contamination and great danger. In contrast, in the West Virginia Carbide plant's MIC unit, separate tanks are provided between the refining system and the storage tank where the newly produced MIC can be checked for purity.

3. When the regular make up and blow down system was not working, the storage tank was pressurized through a bypass procedure using copper tubing. It was then possible for copper compound coatings from the tubing lining to be mixed with MIC. This bypass procedure was made despite knowledge of the potential danger. As stated in Union Carbide's manual on MIC: 'Iron, copper, tin and zinc must be excluded from contact with methyl isocyanate. They catalyze a dangerously rapid trimerization... The heat evolved can generate a reaction of explosive violence.' (UCC 1976, 9)

4. Vent headers were also made of carbon steel. In case of any back pressure inside the header, the material inside could go back inside the storage tank. No check valves were provide. Movement of material back into the storage tank would take with it rusted coating from the walls of the vent header, thus causing a catalytic reaction.

5. Carbide's operating manual for MIC states: 'Methyl isocyanate which has been extensively purified by distillation will spontaneously polymerize without a catalyst after standing for several hours at room temperature.' (UCIL 1978, 166) Yet, in 1984, the refrigeration unit for the storage tank was shut down. The Temperature Indicator Alarm (TIA) had been malfunctioning since shortly after the plant began operating.

6. In the Bhopal plant, in addition to refrigeration facilities for the storage tanks, there was also a direct chilling system using a water-based brine solution as a coolant for the Refining System. The brine solution could have provided a source of water contamination. Like elsewhere in the design, connecting pipes were so cheaply designed that intentional or accidental release was easy. Most of the lines were not provided with check valves to ensure one-way flow. Brine was chosen over a chloroform cooling system to save expense. In the West Virginia plant, there is a chloroform cooling system. (Chloroform, which otherwise would be more expensive and hazardous, is actually safer than brine in cooling MIC, since chloroform is inert with MIC and brine solution is highly reactive.)

7. While there was a pressure indicator and controller, there was no provision for an alarm indicating high and low pressure of the tank. (In the Bhopal disaster, despite the lack of such an automatic warning system, the control room operator did notice that the pressure was rising rapidly on tank 610 and informed his supervisor. (See chapter four, p. 33.)

8. There was no instrumental detection for MIC leakage. Leakage was detected by odor and eye irritation, despite it being impossible to detect until exposure is 100 times higher than what threshold limits identify as dangerous.

9. The vent gas scrubber was intended to neutralize any leak with a caustic soda solution. However, the scrubber had two lines leading out of it which allowed untreated gas to reach the atmosphere. This fact indicated that the inclusion of a scrubber in plant design was more for show than as a true safety precaution. This is substantiated by the fact that the scrubber was only built to handle 189 lbs per hour and with an operating pressure of 15 psi. During the 1984 leak, there was a flow of 40,000 pounds per hour at approximately 180 psi. The relief valve connecting the MIC unit to the scrubber was set to release material at a pressure of 40 psi. Thus, within the design itself, there was the problem of the scrubber being able to accommodate only 38 percent of what could be released from the MIC unit. Even discounting the magnitude of the 1984 leak, there was no serous intention of the vent gas scrubber serving the purpose of gas neutralization, except in very small quantities.

10. The flare tower connected to the MIC unit was claimed to be a part of the MIC safety system. In fact, it was a component of the regular process for manufacture of phosgene, one of the components of MIC. The flare tower was designed to burn off carbon monoxide when it was not being used for production of phosgene. The tower was thus designed for slow, steady flow and with a water seal to prevent backfire of carbon monoxide into the pipeline. The capacity of the flare tower was clearly insufficient to handle the flow of MIC generated on 2 December 1984. Further, the water seal necessary for the carbon monoxide process would have worsened the MIC reaction since water will react with MIC and cause a catalytic reaction, particularly when mixed with rust particles from the walls of the sealed tank. Of course, these design deficiencies are compounded if the flare tower is switched off completely, as was the case on 2 December 1984.

11. The water sprinkling system could not spray high enough to reach the gas. When the company squad arrived on the scene, it, too, was unable to spray the water 120 feet to the top of the vent gas scrubber from where the gas was gushing out

Negligent operating procedures

1. Faulty plant design was worsened by on-site manual management decisions to bypass approved operating procedures, to save time and money. To avoid the appearance of safety rules being constantly broken, these bypasses were often legitimized by rewriting the rules. One example of such a rewrite was provisions for shutting down the MIC refrigeration unit when production was not in process. This was a change from the 1978 operating manual's specification that MIC be stored an ideal temperature of 0 °C and never exceeding 5 °C. Further the temperature indicator alarm was malfunctioning from just after the time the plant began operation. As a result, there was no recording of temperatures in the log book and thus one of the key indicators of any abnormal conditions inside the tank was never known.

2. The level indicator and alarm of the storage tank were often out of order. This created the possibility of overflow in filling the tank and made it impossible to determine if the level was being reduced due to leakage of the tank's contents.

3. For one month prior to the disaster, the pressure control valve on tank 610 was malfunctioning. This kept the tank from holding pressure. An attempt was made to pressurize the tank on 20 November but it was not successful. This clearly showed that the control valve was leaking badly. Ultimately, this malfunctioning valve allowed water to enter the tank when connecting lines of the RVVH downstream were being washed.

4. Safety specifications were also rewritten to allow the vent gas scrubber to be shut off when the plant was not in operation. At the time of the disaster, it could not even be switched on because the circulation pump which discharges the caustic soda neutralizer was not functioning and there was insufficient caustic soda solution in the VGS.

5. The flare tower was down, having been under repair since 25 November 1984. The repair should have taken just eight hours.

6. Air supply to critical monitoring instruments and gauges was cut off during plant shutdowns.

7. In 1979–80, the parameters were read every hour. This was later reduced to once in two hours. About one month prior to the disaster, requirements for parameter reading were reduced to once every eight hours.

8. There was a design modification carried out in a 1983 shut down to interconnect the PVH with the RVVH so that in case either was out of service, the other could serve its purpose. This jumper line provided a route for the water to enter the MIC tank 610.

9. The public alarm was modified so that it could only be heard within the factory premises. This was to keep the public from knowing the frequency of toxic releases.

Personnel problems

1. By 1981, production had fallen to barely 50 percent of capacity. The company responded by reducing the work force by 35 percent, with disproportionate cuts in costly, highly trained personnel. Manning levels at the MIC unit were cut. Particularly, the number of maintenance personnel in the MIC unit was cut from six to two and the earlier practice of having at least one qualified instrument technician in each shift was discontinued. In 1983, the fire and rescue squad was filled with non-qualified persons and later changed to an emergency squad. One month before the disaster, the vital post of maintenance supervisor was eliminated from the night shift.

2. On 16 November 1984, a shuffling of shift scheduled occurred, which put in place the team responsible for the plant on the night of the disaster. During the water-washing operation, the officers present were the plant superintendent, the production assistant and the operator. None of them were originally trained for the MIC unit. The following shift was also comprised of people transferred from other units.

3. Turnover of trained workers was very high. On 5 November 1984, five plant operators were transferred from the Sevin plant to the MIC plant. They were given orders to take charge with only 20 days training.

4. In 1982, workers questioned the safety of the plant. They informed the Prime Minister, Chief Minister, Labor Minister and Labor

Commissioner about an impending disaster but got no response. Instead, the workers were harassed into submitting to the management's negligent decisions.

5. Total time for contamination, violent reaction and the leak, took about five hours, from 9:00 p.m. to 2:00 a.m. Officials came to know about the leak around 11:30 p.m. Had they been safety conscious, hospitals and other emergency teams could have been informed of the leak in sufficient time for evacuations, even without a previously prepared evacuation plan.

6

Carbide's 'Sabotage' Theory

UNION CARBIDE'S MANAGEMENT has stated in court that the cause of the Bhopal disaster was an act of sabotage by a 'disgruntled worker.' Through the 'sabotage' theory, Union Carbide has tried both to shift blame from the company to workers and to cover up the long history of negligence that led to the disaster. The sabotage theory tries to take advantage of the negative image the media has given workers in order to make the management of the company look clean. For this, Union Carbide should be sued for libel.

The sabotage theory tries to make it appear that the cause of the disaster was an isolated event on the night of 2 December 1984. The truth is that the accident was caused by the corporate management priorities and practices of Union Carbide. The Bhopal gas disaster was not caused by a single event, but by the practice of putting profits before people, a company policy that was in place even before the plant was constructed.

According to the sabotage theory, a disgruntled worker intentionally attached a water line to the MIC tank hoping to spoil its contents. There is no explanation for it being so easy for such an act to occur and no explanation for the lack of safeguards against contaminations that could lead to leaks. As Arun Subramaniam observes in *Business India*: 'Apart from being patently false, and self-serving at best, the sabotage explanation in fact implicitly amounts to an admission that the plant was not equipped with fail-safe systems and was therefore defective.' (Subramaniam, 1985, 46)

The beginning of Carbide's attempts to shift the blame to a saboteur came with the release of their official 'Bhopal Methyl Isocyanate Incident Investigation Team Report' in 1985. (UCC 1985, 21) In this report, the cause of the leak is said to be the introduction of 1,000 to 2,000 pounds of water into the MIC tank, either 'inadvertently or deliberately.' The report goes on to admit that 'a slip bind was not used to isolate the piping being washed. However, entry of water into tank 610 from this washing would have required simultaneous leaks through several reportedly closed valves, which is highly improbable.' (UCC 1985, 21) Clearly, the investigation team did not want to acknowledge the possibility that grossly inadequate maintenance would permit water to pass even through closed valves because of malfunctioning. It was much easier to shift the blame to a disgruntled worker.

Carbide's first explicit accusation of sabotage came in late 1985. At the 'Chemical Industry After Bhopal' conference held in London in November 1985, it was reported that UCC had all but ruled out anything but a deliberate act. Jackson Browning, UCC vice president for health, safety and environmental affairs, told the *Guardian* that 'The company's scientists had established beyond doubt... that the introduction of 120 to 140 gallons of water into a storage tank could not have occurred by accident.' (8 November 1985, p. 11)

Following these statements, a Sikh terrorist group named Black June was accused. The proof against them: some people in a small city of Punjab province were said to have seen a Black June propaganda poster claiming responsibility for the disaster. More substantial evidence was never provided as Carbide became aware of the multiple advantages inherent in accusing one of their own workers.

The first instance was on 11 August 1986, when Carbide's media relations manager, Harvey I. Cobert, stated to the press that the leak was caused by a 'disgruntled worker,' who purposefully hooked up a water line directly to the MIC tank to spoil its contents. Although no individual worker was ever named, they made a case to implicate an employee who had been recently demoted and thus would have motivation. The basis of Carbide's case was the supposed presence of the guilty worker near the MIC storage area on the night of 2 December despite his having been shifted out from the MIC unit. Later Carbide changed their story and began insisting that the guilty worker could not be identified because his fellow workers, hoping to protect

both him and themselves, lied during interviews and insisted that they could not offer any substantial evidence.

From Carbide's description of the accused worker, it was clear they were trying to blame M. L. Verma. During the previous year, Verma had been having trouble with management because he refused to do jobs for which he was not qualified and was not being confirmed in his post. Like many other workers, he was asked to take responsibility for dangerous processes without formal training. When he was transferred to the MIC unit, Verma was told to learn what he needed from fellow workers. But once he knew enough to pass the oral examination, they still refused to confirm him, to avoid having to give him higher pay. Verma therefore turned down the position of regular operator.

Then, just a few days before the disaster, the management tried to discipline Verma by transferring him out of the MIC unit. The transfer order was conveyed to him orally and noted only in the daily notes from the production superintendent to operators. According to Carbide's own instructions, this was not the proper procedure for transfers. But management knew that if they gave Verma a formal letter, it could later be the basis of a law suit against them.

Since Verma was never given proper notice of his transfer, he continued to come to the MIC unit. No one ever challenged him for this, yet the description of the supposed saboteur indicated that he was 'illegally' in the MIC unit on the night of the leak. It is a sad irony that Verma's protests against unfair and unsafe management practices were later used to cover up Carbide's faults. Carbide never publicized Verma's identity because they knew that exposure of the true story would only further implicate them.

Carbide's most serious presentation of the sabotage theory was a 'scientific' paper by Ashok Kalelkar, a representative of the American consulting firm Arthur D. Little, Inc., the firm hired by Union Carbide to do an 'independent' investigation of the sabotage theory. Presented at a professional conference for chemical engineers and industrial safety experts in London in 1988, the paper aroused much indignation among those present. Many of them felt that a scientific forum should not be used to spread Carbide propaganda.

Using Bhopal as a case study, Kalelkar argued that finding the cause of industrial accidents is difficult because 'there is a reflexive tendency among plant workers everywhere to attempt to divorce

themselves from the events surrounding any incident and to distort or omit facts to serve their own purposes.' (Kalelkar, 7) This general slander of workers was used to justify detailed presentation of the sabotage theory without substantive proof whatsoever. Kalelkar used the supposedly 'scientific' forum of an independent conference to slander the worker community and to shift the blame for the tragedy at Bhopal away from corporate management. It was not the workers but Kalelkar who 'deliberately omitted and distorted' critical facts to exonerate the guilty corporation.

According to Kalelkar, the Bhopal tragedy was caused by the joint action of MIC workers on duty the night of 2 December. These workers were attempting to cover up their mistakes after coming to know that the MIC in tank 610 had been contaminated with water. In Kalelkar's story, a vengeful worker entered the MIC storage area during the shift change at 10:45 p.m. when the area would have been deserted. He easily unscrewed the pressure indicator valve and attached a water hose, thus directly feeding water into the MIC tank. According to Kalelkar, this direct introduction of water to tank 610 caused the runaway reaction that resulted in the Bhopal tragedy. His theory claims that workers in the MIC unit came to know of this input of water and quickly became involved in a conspiratorial effort to cover the alleged saboteur's actions.

Kalelkar attempted to substantiate this story by claiming that during an interview, an instrument supervisor reported that on the day following the leak, the local pressure indicator on tank 610 was missing. Kalelkar claims that this report is 'of crucial importance because the instrument is on the tank manhole and was one of the few places to which a water hose could be connected.' (Kalelkar, 14) The same supervisor also was reported to have found a hose lying beside the tank with water running out of it.

But it was not unusual for water hoses to be lying about in this part of the plant, sometimes with the water running, as water was used to clean the floor, dilute caustic solutions, cooling pumps, etc. Other workers have stated that the original instrument gauge was ruined when the high pressure in the tank exceeded the range of the gauge. A new gauge was fitted following the leak so that pressure could be monitored in anticipation of any new problems. Only in the interim period, between removal of the ruined gauge and the fitting of a replacement, was the connecting valve uncovered.

To further embellish his story, Kalelkar alleges that there was a transfer of MIC out of tank 610 into the Sevin charge pot on the night of 2 December. This would have been an abnormal operation since tank 611 still contained 21 tons of MIC and it was standard procedure to exhaust the contents of one tank before tapping another. Thus, according to Kalelkar, a transfer from tank 610 could only have been an attempt to remove water that workers knew had been fed into the tank. Since the transfer line from the MIC tank to the Sevin charge pot is at the bottom of the tank, any water, which is heavier than MIC, could possibly have been moved out. Kalelkar argues that the attempted removal indicates that the workers knew that water contamination was the source of the pressure rise. However, the removal of one ton of MIC would clearly have been insufficient to divert the rapid rise in pressure.

The 'evidence' of attempted transfer from tank 610 is Kalelkar's claim that on examination of the Sevin charge pot a few days after the leak, the contents were a greenish color, with a higher than normal chloroform content (supposedly the character of the MIC in tank 610 prior to the leak) and with the presence of non-volatile reaction products of a water-MIC reaction. Kalelkar further claims that the log book shows clear evidence of alteration to cover up this failed attempt – that timings were altered to hide the length of time workers knew of the contamination, conspiring to shift any blame from themselves.

Critical to this argument is whether contamination was known prior to tea break at 12:15 a.m. The workers knew by that time that there was a problem with tank 610 (although they did not know the cause). They had reported evidence of a MIC leak to their supervisor, who told them to search for the leak later. Kalelkar, using the duty tea boy as his primary witness, insists that the tea break on 3 December was not a normal one but tension-ridden, indicating signs of a problem. He thus maintains that workers were aware of the water contamination by 12:15 a.m. and were even then trying to divert a runaway reaction. The truth is that the workers did know there was a problem with tank 610 and hence their agitation during the tea break was perfectly natural.

All of Kalelkar's 'evidence' comes from 'peripheral' witnesses. These are the only reliable source of information, in his view, since all workers directly involved would be lying, to cover up their own mis-

takes. In other words, the testimony of a tea boy was more trustworthy than that of the workers.

Yet the tea boy's account does not in any event contradict the workers' story of what really happened. The accuracy of the report of the missing pressure indicator on the manhole cover is highly questionable because the instrument supervisor who made the allegation was not on shift when the leak was underway.

Sunderrajan, the instrument supervisor interviewed by Carbide, came on shift the morning after the leak, after the casing of the tank had completely split and many adjustments made in attempts to minimize the outflow of gas. Sunderrajan's explanations are not credible simply because they are second-hand opinions, based on information given by people who also could not have known what really happened.

Further, my interviews with workers who were on duty for the second and third shifts reveal that no attempt was made to transfer the contents of tank 610 during this time. Kalelkar was incorrect in claiming that workers would have thought that since water is heavier than MIC, it could have been transferred from an outlet at the bottom of the storage tank. Unlike Kalelkar, workers knew the chemistry of MIC and thus knew that water would not separate out but cause a volatile reaction. Union Carbide's discovery of a small amount of reaction products in the charge pot, during the investigations just following the leak, was not because of an attempted transfer. It was entirely normal for the charge pot to contain these products due to routine entry of moisture, along with the nitrogen used for pressurizing the tank, and due to impurities introduced during the refining process.

Kalelkar's demonstrates that his understanding of the chemistry of MIC was inadequate when he stated that only small 'normal' amounts of water were found in the branch of the vent line connected to tank 611. It was not normal for any amount of water to be in lines connected to MIC storage tanks. The dangerous reaction that is set in motion when MIC comes in contact with water is the very reason the tanks were kept pressurized with nitrogen.

However, the most substantive and indisputable critique of Kalelkar's theory is the timing. Kalelkar claims that water was introduced into tank 610 during the shift change at around 10:45 p.m. The

water introduced would have been filter water coming from a process water line. This water would have been free of contamination and without any impurities that could have acted as catalysts in a water–MIC reaction. According to Carbide's safety manual (UCIL 1978, 167), a violent reaction without the presence of a catalyst would have taken over 23 hours to take place. Yet, between 10:20 p.m. and 11:00 p.m., the tank showed a pressure rise from 2 to 10 psi, indicating that a reaction had already begun. By 11:00 p.m., MIC was being vented into the atmosphere. By 12:30 a.m., the cement casing of the tank split and the bulk of the tank's contents was expelled. By 1:45 a.m., most of the material from the tank had escaped.

The issue of timing thoroughly (and scientifically) refutes Kalelkar's sabotage theory. It is also possible to counter other specific points raised by Kalelkar in his attempts to refute the water washing theory.

Kalelkar argues that water from the water-washing exercise could not have entered tank 610 because it would have had to pass through a RVVH valve that was tested in July 1985 and confirmed as 'leak free.' Kalelkar argues that because the master card (which remained on the valve even after the leak) recorded the valve as 'closed,' the valve necessarily was closed. However, grossly irregular and inaccurate logging was characteristic of the way in which the Carbide plant operated and was part of the overall negligence that led to the disaster. I believe that though the RVVH isolation valve was tagged 'closed,' in fact it was slightly open. The valve was ten feet above the ground and was difficult to maneuver. There is no way to confirm whether an isolation valve is closed; hence, the necessity of inserting a slip bind for positive isolation. Carbide's own training teaches that a valve must never be trusted; this is particularly the case when valves are re-used after repair in the factory's maintenance workshop. Carbide made re-use of valves standard practice despite the increased risk of malfunctioning. Even knowing this, the supervisor gave orders for the water-washing exercise on 2 December without instructions to use a slip bind.

Kalelkar also argues that the flow of water could not have attained a hydraulic head sufficiently high to raise the water 10.4 feet, to reach the top of the PVH. This argument is based on the assumption that water never backed up due to choked valves. He cites five eyewitnesses reporting that these valves were free flowing. These

eyewitness reports are possibly true in the time span after the compounds choking the valves were dissolved. By the time these valves were free flowing, water would already have backed up sufficiently to enter the RVVH and, ultimately, the MIC tank.

Lastly, Kalelkar's attempts to refute the water-washing theory with the argument that for water to have reached the RVVH, then up to the blow down control valve, it would have had to fill the entire RVVH and PVH piping configuration. Kalelkar 'proved' water did not fill the entire piping configuration through an investigation in which a hole was drilled in the lowest point of the PVH to see if the pipes were still holding water. The pipes were found to be dry and Kalelkar thus argues that water could not have passed through these lines. However, the water-washing theory maintains that the high pressure associated with the leak would have pushed both the water and the gas out of the lines through a venturi action in which the rush of gas created a vacuum that drew on all side-connecting lines. Any water in contact with the flowing MIC would have been caught in the reaction process.

All of Kalelkar's arguments are based on a 'conspiracy' among workers to cover up the intentional entry of water into tank 610 by one of their peers. Why would workers participate in such a cover-up? Why would they 'protect' a fellow worker if his behavior caused death and terror to their own families and neighbors? The Bhopal disaster was not caused by workers but was the result of faulty plant design, gross neglect of safety and insufficient personnel. Carbide management has falsely accused the workers to conceal their own misdeeds.

But the most compelling evidence of the false claims of the sabotage theory is its abandonment by the officials of Carbide's Indian subsidiary in the Bhopal court which was (and is still) hearing the criminal charges of culpable homicide against them for their role in the Bhopal disaster. Rajendra Singh, their chief lawyer, informed the court that the water did indeed enter tank 610 through the Relief Valve Vent Header (RVVH) as a consequence of the water washing being undertaken by plant personnel instructed to do so by their superiors. (*The Pioneer*, Lucknow, 27 February 1993.) This explanation means that the water was *not* inducted into the tank by a water hose directly connected to the tank by a single disgruntled worker, as the sabotage theory alleges.

7

Carbide's Blame and Government Responsibility

'IT IS NOT only the scale of devastation and human suffering that makes Bhopal unique,' Arun Subramaniam points out in his article in *Business India* on the first anniversary of the Bhopal disaster. 'More important is the fact that, unlike in similar disasters in the past, the management's culpability in this case is so evident and so easily demonstrable.' (Subramanian 1985, 42)

He goes on to argue for the importance of prosecuting the guilty as a means of containing the 'catastrophic potential of rapidly proliferating high-risk industrial technologies.' Specifically, he insists that corporate actors be held personally liable so that abuses are no longer hidden and protected by the 'corporate veil.' Subramaniam does not consider the Bhopal tragedy an 'accident,' but the inevitable result of a series of corporate decisions that can 'only be described as criminally negligent.' (Subramaniam 1985, 42–46)

Until recently, Subramaniam's argument has not been well acknowledged. In the out-of-court settlement imposed on the victims in February 1989 by Carbide and the Government of India, criminal proceedings were quashed and Union Carbide exonerated of all liability in exchange for $470 million – an amount inadequate to cover health care monitoring, much less rehabilitation and compensation for pain and suffering. However, the Supreme Court judgement of 3 October 1991, upholding the settlement of damage claims, reopened criminal proceedings and has finally made possible a trial to expose

the misconduct and prosecute the guilty. It is urgently important that these criminal proceedings are carried out promptly and thoroughly.

As with other criminal convicts, the guilty must be punished. Serious crimes were committed in board rooms and corporate offices, far away from Bhopal, with signatures on defective design drafts and through inattention to safety audits. Although acts were done in fancy offices, the result was as brutal as a back street stabbing. Death caused by human decision is violent, no matter how or where it occurs.

The importance of punishing the guilty goes beyond the idea of 'an eye for an eye.' To prevent future 'Bhopals,' we must set clear standards for those making high-risk decisions. Managers must know that they will be held personally accountable if they are negligent. They must know that they face the prospect of being liable for the consequences of their carelessness or greed.

Why is it so easy to jail a petty thief yet almost impossible to sentence a corporate executive whose actions result in enormous damage to health and environment? Why do statistic ignore business crime? How long can we protect corporate criminals from public outrage? Now is the time for change. The Bhopal litigation should become a landmark case in showing that the laws are not empty symbols of democracy but real means to hold accountable those who jeopardize the public well-being. Former Supreme Court Justice Krishna Iyer has said that Bhopal remains 'the worst judicial and jurisprudential crisis in history.' Current criminal proceedings allow us one last chance to intervene.

However, as Justice Iyer points out, it is insufficient to limit the proceedings to Carbide officials. In a November 1991 article in *Economic and Political Weekly,* he forcefully argues that negligent public officials also must be held accountable. He calls for thorough research, leading to the indictment of responsible figures at both the state and national levels. (Iyer 1991, 2706–07)

Justice Iyer's arguments make it clear that criminal prosecution is necessary if Bhopal is not to remain the 'worst judicial and jurisprudential disaster in history.' (Iyer 1991, 2705) He also points to the need for thorough and specific investigation of lapses of responsibility. Clearly, the figureheads identified in the ongoing criminal proceedings do not comprise a sufficiently detailed list.

The importance of prosecuting guilty individuals is clearly a necessary step in preventing future Bhopals. Moreover, a trial would finally expose the full details of the disaster. The disclosure through judicial discovery in a trial will finally give us access to Carbide's research on the contents and effects of the gas released on the night of December 2–3, 1984. Such information is essential for proper medical treatment of victims. Until now, medical research and care have proceeded on the assumption that the only exposure was to MIC. Yet, in my own house, I know that the white gas that choked us was not MIC alone. If MIC had been there with such concentration, my entire family would be dead. Further, the smell of the gas did not resemble that of the MIC vapours occurring from time to time from small leaks at the plant. Clearly, the reaction of MIC with water in the tank and its subsequent dispersal in the atmosphere led to a chemical breakdown, with the result that sections of the city were exposed to different gases in different combinations. We must understand these differences to treat victims properly and to predict long-term affects. My family and others living nearby do not now have the serious disabilities of those living in other areas. However, there may be a greater likelihood of long-term effects among us, such as cancer.

For now, a trial is the only way to access Carbide's research data. Much of the information to which workers and communities should have access to protect themselves from hazardous exposure is now protected by patent law or commercial secrecy. Corporations claim that such information is a 'trade secret.' This is a gross abuse of knowledge to serve vested interests. The public has a right to all information crucial to their health.

Disregard for public welfare has always been a function of multinational corporate capitalism. The threat posed by this protection of vested interests, however, is now dramatically increasing. High-risk technologies are spreading at an unmanageable pace, yet the international political response has been toward strengthening not curtailing, patents. Clauses in the latest international agreements even go so far as to make it possible to challenge all Government regulation as an infringement on free trade!

Suspending public access to information and governments' right to respond with protective regulations will create an environment where 'Bhopals' will grow like weeds, spreading throughout the land wherever there are no rich people to hire a gardener to protect them. Industrial tragedies will increase and the Indian people will have no

right to protest. The only way to avoid this sad future is to understand Bhopal itself as a conspiracy of the West and Third World elites to permit gross negligence, confident that no one will be punished.

The negligence leading to the disaster was possible because Union Carbide knew it would never be held truly accountable for unsafe operations in the Third World. The Government of India has adopted an economic development strategy in which foreign investment and technology transfer appear to be the highest priority, no matter what the risk. Foreign corporations thus feel free to downgrade safety considerations from their management planning. This assurance of impunity has been demonstrated by the continued failure of the Indian courts to hold Union Carbide liable for the Bhopal disaster.

Justice in India is no longer determined by the Constitution and legal standards but by the *diktat* of a market-driven economy. Particularly since the acceptance of IMF intervention in July 1991, there has been an abrupt reversal of the post-independence commitment to self-reliance and an overt rush to create an environment amenable to foreign investment. In other countries subject to IMF 'conditionalities,' there has been a similar decline in the autonomy of the courts. Under IMF pressure, legal decisions are increasingly dictated by the need to protect foreign corporations instead of the country's own citizens.

Acknowledging that rehabilitation of the persons affected by the Bhopal tragedy will require long-term reform of basic economic policies, is the first step toward understanding 'Bhopal' as a symbol of the exploitative relation between the First and Third Worlds. When multinational corporations move into the Third World, they do so to avoid the costs of safety installations. Mishap leading to death and destruction occurs with tragic frequency. Multinational corporate abuse in the Third World has thus become one of the most urgent issues in international politics.

Multinational corporations clearly take advantage of Third World dependence on their investment by ignoring the safety standards set by the host country. Corporations like Union Carbide assume that they will never be held accountable. This assumption of impunity endangers both the First and Third Worlds. So long as corporations are not held accountable, hazards will continue to be exported to the Third World and the people of the Third World will suffer. The export of hazard also puts workers and communities in the First World at

risk. When corporations are able to bypass accountability in the Third World, worker and community efforts toward greater safety in the First World will be paralyzed. Demands made in the First World are likely to be countered with corporate threats to move their operations to low-wage Third World economies.

Accordingly, the legal outcome of the Bhopal case could contribute to increasing industrial hazards all over the world. It must be recognized that the Bhopal disaster is not an isolated occurrence caused by unusual circumstances. Reckless and greedy use of technology has become a global trend that must be countered with rigorous legal response. The rigor of the courts is essential in reversing this trend. India must not follow other developing countries in letting IMF pressure lead to mass sacrifice of human life.

The continued suffering of victims alongside the rapid liberalization of the Indian economy makes it clear that 'Bhopal' is a continuing tragedy, requiring renewed vigilance. In addition to supporting the demands of gas victims regarding rehabilitation, it is also necessary to demonstrate how 'Bhopal' is not an isolated event. The tragedy of Bhopal is part of a development strategy that prioritizes industrialization as the means to further spread Western consumer lifestyle. Clearly, such 'development' has many unfortunate side effects. The environment is pillaged, the people's health is undermined and local culture is destroyed. 'Bhopal' stands as a symbol of this destruction, a reminder that commitment to the people of India involves more than the ability to compete in the global market.

'Bhopal' should remind us that our program for development must not mimic the West but that we must set our own agenda. The path that the IMF dictates ignores our own local wisdom which recommends 'we must not stretch our legs beyond the bedsheet.' Although our needs are many, we must not seek to fill them through dependence on those outsiders who only wish to continue the colonial pattern of abuse. We do not need luxury consumer goods if this means having a corporate raj dictating whether we live or die.

We have many stomachs to feed and many bodies to clothe, but we also have many hands eager to work. Why should we follow a development strategy that denies this reality? Advanced technologies from abroad may provide fancy cars like Marutis for Mumbai businessmen to drive, but what about the rest of us? Big industry may make a few Indians rich, but it can never provide jobs for all our

people. It is time we acknowledge our own traditions of low-technology cottage industries and small farms that use indigenous agricultural methods.

Our country is filled with 'experts' on pesticide-free farming using such local materials as neem. Why don't we acknowledge their expertise? Why is only Western medicine considered 'effective,' when our own ayurvedic medicines not only have the capacity for excellent curative therapies, but can also prevent illness? Why do we carry such a high debt for import of petrol when we have so many 'experts' on effective, non-motorized transport? Horse-drawn tongas can transport us where we need to go without environmental hazard while at the same time providing low-technology jobs for many. The air pollution from motorized transport has severe adverse effects on health; the wastes from tongas provide much needed cooking fuel.

India's local 'experts' and their traditional know-how provide the only possible basis for a democratic distribution of economic opportunity and resources in the country. We must learn to rely more on ourselves in order to rid this country of the multinational cancer.

8

Epilogue: The Fight against Toxics

ANY PLANT THAT manufactures highly toxic, reactive and flammable material must have a series of safeguards against accidents, beginning with safe design and operation of the plant and well-trained operating and maintenance personnel. Even after an accident, there are certain precautions that will minimize the effect of a toxic chemical release, such as prompt and widespread notification of the accident, evacuation of plant personnel and the surrounding community, and medical personnel informed in advance on how to treat those exposed to the release.

Clearly, it is not just a matter of improving technology, although that will help. People from many different walks of life must become informed and learn to work together for the good of all. Toward this end, I think we should follow the Indian tradition of pursuing great social or religious causes by organizing a 'yatra' or mass march to fight the toxic scourge. We workers and victims of Bhopal should come together in a toxics yatra, traveling throughout the country, and if possible the world, to share with the people the story and lessons of Bhopal. As we deliver our message about the risks of industrialization and the need for corporate accountability, we need to emphasize that the responsibility for worker and community safety must be shared by all those involved. The proposed 'yatra' would carry the following messages:

Message to Company Owners

Company owners must acknowledge the fundamental immortality of putting profits before people. Lives of workers and communities, including those in the Third World, can never be measured solely in military terms. No matter how thorough a rehabilitation plan, death and continuing sickness cannot be paid for in dollars. Hence, prevention of industrial disasters is the only answer. Prevention is impossible so long as 'good management' is considered to be that which brings the highest profit. When making money is the first priority, safety will always be sacrificed.

Further, those companies manufacturing or handling hazardous chemicals, such as MIC, must do the following:

1. Plants must be designed for optimum safety; the design should not be changed later to cut costs.

2. Operating procedures must follow design specifications. Safety rules should not be bypassed for the sake of convenience or economy.

3. All personnel must be fully trained, including a safety squad to handle emergencies.

4. Evacuation plans must be made for both the plant and the surrounding community.

Alarms must always be in working order and turned on.

5. Chemicals produced must be fully researched so that information is readily available on treatment procedures in case of exposure. Information on health hazards must be provided to both workers and the Surrounding community.

6. Before starting up the plant, information on production procedures and on possible hazards must be passed on to the responsible government.

7. Periodic medical checks must be done on all workers, and the results made available to the workers.

Message to Unions

Unions must now take on response that comes with high technology industrialization. It is not enough to look out for the welfare of workers. Because these technologies cause risks beyond the borders of any factory, unions must also be concerned about the welfare of nearby communities. Specifically, unions must do the following:

1. Unions must emphasize safety issues. There must be a commitment never to agree to bypass safety rules in exchange for other gains.

2. The union must examine the safety system of the plant to make an independent judgement about its adequacy. If any deficiency is found, complaints must be made both to the management and to government regulators. The issue must not be dropped until necessary changes are made.

3. Unions must form safety watch bodies to monitor safety in the plant.

4. Unions must check periodic health records of workers note recurrent symptoms that may be due to occupational hazards.

5. Unions must make a record of all accidents and make reports to both government regulators and the press.

6. Unions must cooperate with other unions in plants that manufacture similar types of chemicals, so that there can be joint action on safety issues.

Message to Communities

Today, although over a decade has passed since the Bhopal disaster, the community living near the plant most exposed to toxic gases continues to suffer from neglect and abuse. To prevent such situations in the future, communities living near hazardous facilities must take concrete steps. Former Supreme Court Justice Krishna Iyer has argued that whenever extremely hazardous enterprises seek licenses, there must be a public hearing so that concerned professionals, social activists and the local community can evaluate the risks. He argues that the state must conduct these hearings to fulfill their obligation to ensure citizens' right to life. Citizens must take up this argument and learn to be vigilant against industrial hazards before they are victimized. They must demand their rights to information so that they can take necessary steps to protect themselves. Specifically, they must insist that the following steps are taken:

1. Plants manufacturing or handling hazardous substances must place clear warning labels on the walls surrounding the plant, similar to the labels on cigarette packets warning of the health dangers of smoking. These warning labels must particularly specify the toxic properties of the chemicals produced. Instructions should be included

that make clear the steps to be taken in the case of a leak or explosion, including evacuation plans and immediate first aid remedies.

2. Communities must ensure that there is a danger warning system, including alarms loud enough to be heard throughout the community and plans for emergency intercom and radio broadcast to provide essential information.

3. Communities must require that periodic health checks to be given to residents of the community to detect possible exposure damage.

4. Communities must ensure that periodic environmental checks be carried out so that they can be certain that their air drinking water are safe and that the soil is not becoming contaminated.

5. Communities must organize themselves to keep watch over a plant. If safety problems are detected, communities must report these problems to government regulating bodies and to the press. Care should be taken in dealing directly with the company because of their sly ways of covering up problems. It is important that there is official documenting of all problems caused by the company.

Message to Government Regulators

Pollution Control Boards and other concern agencies must fully implement existing policies on environmental safety and the operation of hazardous plants. They must gather information on hazardous processes and oversee their functioning not as a formal routine but out of sincere dedication to their responsibilities to ensure the safety of workers and communities. Specifically, they must do the following:

1. Thorough plant inspection must be carried out on site. Inspections that are merely signed off in the administrative building serve no purpose. Inspections after accidents must be particularly thorough and well documented. Staff in government offices should remember that corruption kills.

2. Licensing procedures are now based on finished products. Approvals must be extended to include analysis of all chemicals involved in the manufacturing process.

3. In addition to periodic on-site inspections, government staff must also meet with unions, workers, management and the community to ensure that procedures carried out during inspections are done on a regular basis. It is essential that dialogue be maintained between

all parties substantially affected by hazardous operations. Pollution Control Boards must take serious and prompt action regarding any complaint from workers and communities.

4. Governments must require company owners to do the following *prior* to plant start up:

a) Supply complete information on involved chemicals

b) Educate both workers and surrounding communities

c) Verify the existence of a workable evacuation and emergency plan

d) Verify that the plant was constructed according to design

5. After start up of hazardous operations, government staff must regularly test air, water and soil for toxic emissions, They also must ensure that periodic health checks are done on workers and community residents.

6. Pollution Control Boards must be willing to prosecute for safety lapses. The government should be aware that they too can be prosecuted for contributory negligence.

Message to journalists

'Bhopal' consists of many tragedies-health, environmental, legal and also media. The press quickly tired of the Bhopal issue and thus only represented the superficial aspects of the problem. Journalists saw the disaster as an isolated event, separate from the ongoing social and political conditions that caused it and now inhibit all rehabilitation efforts. Responsible journalism is essential in dealing with the proliferation of high-risk technologies. Citizens have a right to know what is endangering their lives, and journalists have a vital role in making certain that citizens do know. Journalists can help assure that citizens have sufficient information to evaluate thoroughly whether or not hazardous technologies are worth the risk they bring.

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Only if these messages are heeded can we succeed in the fight against toxics. Bhopal tells us the price of our failing to do so: massive but unnecessary human suffering. But all that suffering will not have been in vain if the lessons of Bhopal are truly learned. The people of Bhopal – both workers and victims—can never forget those lessons. The rest of the world must not.

9

Other Workers Speak Out: Testimonies from Union Carbide Bhopal Plant Personnel

M. L. Verma, Age 37
(Carbide Worker Token No 4557)
Industry Inspector, Government of Madhya Pradesh
(Originally hired for alpha-napthol plant)

I JOINED UNION Carbide on 28 March 1977 as part of the second batch for the alpha-napthol plant. I had six months of on-the-job training period, they used us for pre-commissioning and start up of the napthol plant. I continued working in the napthol plant but the plant was not running successfully. There were plans for large-scale modifications, for which they shut down the plant. In this period, most of the operators of the napthol plant were transferred to the formulation plant. As there were no qualified operator jobs, we worked as pickers and in other labor-class jobs. We came back to the napthol plant when it restarted, but it still did not function properly. They decided to permanently close down the alpha-napthol plant, so all the operating staff became jobless. They launched a voluntary retirement scheme and about 30 workers resigned. Those of us who remained were sent for theoretical training for the MIC plant. After training, we took exams for selection as an MIC unit operator. I was selected.

About September 1983, I was sent to the MIC unit for on-the-job training. There they told me that I must learn about the MIC plant from my fellow workers. When the plant was running, it was difficult to take on-the-job training, but somehow I began learning about the MIC process. My demands for assistance were always refused. In this period, I was asked to take charge when a regular operator was absent from duty. I refused to take charge under these conditions; they had not confirmed me as a regular operator for the MIC plant. I had decided not to take charge until after confirmation because I wanted to be sufficiently trained and I wanted the financial benefits. For these reasons, management refused to confirm me. They said there were no vacancies.

They gave me an oral warning about the job refusal but never gave it in writing since they were aware that I was not confirmed as a regular operator. However, there were workers given confirmations who joined MIC after me and who were less qualified. These persons never resisted management using them in positions for which they were not qualified. For almost a year, I refused to take charge as an operator because I was not yet confirmed. Then, in November 1984, MIC plant manager S. P. Choudhry told me that if I did not follow all orders, I would be transferred to other units. I told him that I was not refusing any job for which I was confirmed. I would perform any job for which I was needed if I was trained properly and was receiving proper financial benefits. I told Choudhry that if they were to transfer me due to false charges of job refusal, I wanted it in writing so that I could proceed with a legal response.

After a few days, S. P. Choudhry took an oral test from me about the MIC plant process and said that if I passed the test, I would be confirmed. I took the test and was able to give a correct reply to every question. Nonetheless, I was told that I had failed the test and that I was not fit for the MIC plant. Then they told me that I would be transferred to the Sevin plant. They mentioned the transfer in their daily notes but did not give me any letter. I argued that a daily note is not sufficient for transfer purposes and that I required a letter. Nor did they mention the transfer on the notice board.

Even though on the basis of the oral test they said that I was not capable as an MIC plant operator, they had tried months before to force me to take charge in the MIC plant unit when I was not confirmed. The transfer was S. P. Choudhry's way of taking revenge for my not obeying him in the past. Although they announced my trans-

fer on 26 November, I continued to come to the MIC unit. I also began to personally report to the MIC plant superintendent and to the production assistant. This continued until the night of the gas leak. During this week, no action was taken against me for not reporting to the Sevin plant. I went to the MIC unit and sat there because there was no work for me.

On 2 December 1984, I was on night shift. I punched my card around 10:50 and reported to the production assistant of the MIC plant. About 11:15 p.m., I was sitting in the MIC control room along with my fellow workers. Then I went to the tearoom at the 200-ton refrigeration unit. Generally, when we are free, MIC operators sit in this room. The window of the tea room toward the MIC unit was open. Around 11:30 p.m., we felt MIC irritation so we came out from the room to locate the source of the leak. We saw that some water was dropping from the MIC plant structure. Near that water, the MIC was in greater concentration. As we came toward the vent gas scrubber side, we felt high MIC concentration. We reported the MIC leak to production assistant S. Qurashi. The plant superintendent was also sitting there in the control room. They, replied that the MIC plant is down and thus there is no chance of leak. They did not take our report seriously, saying *Koi baht nahin appan chay ke bad dhekhenge* ('Okay, no problem, we will see after tea').

In the meantime, the tea boy came to the control room and we took tea. Then the plant Superintendent went to smoke a cigarette near the security gate as it is not allowed on the plant premises. Now the time was around 12:30 midnight. With the supervisor, we went to the MIC plant. The operator, Khampariya, was ordered to spray water on the leaking point. The supervisor was not able to trace out the source of the leak. Around 12:50 a.m., the leak became vigorous and started coming out from the vent gas scrubber atmospheric line. I was standing in front of the control room when the siren started. After a few minutes, the plant superintendent came back to the MIC unit. As he met me, he asked, 'What happened?' I told him MIC was pouring from the top of the vent gas scrubber.

Because of the siren, the emergency squad came to the MIC unit. They tried to control the leak by massive water spraying. I also helped them until the conditions in the area became unbearable. Then along with other workers, I left the MIC unit area in the opposite wind direction. The MIC production assistant also fled. When the plant superintendent came back from smoking, he ordered that the loud si-

ren be stopped. This was around 1:00 a.m. Around 2:00 a.m. when we learned that the toxic release was affecting the communities outside the plant, we argued with the plant superintendent to restart the loud siren. He refused saying it would serve no purpose, but we insisted until he switched it on again. Around 2:15 a.m., the gas leak stopped so we returned to the MIC unit and discovered that the MIC production assistant was missing. After some time, we learned that he was lying near the boundary wall

Some workers brought him to the dispensary.

Around 3:00 a.m., I saw many people from outside coming for medical help. Many were in dying condition. A managerial staff member, Roy Choudhry, and others were denying help to these people from outside. We argued with the dispensary staff, telling them that we must provide any help possible since they were affected by a leak from our factory. Finally, they began to administer basic first aid. When I came to know that the area in which my family was living was also affected, I rushed home. This was around 5:00 a.m. Outside the plant, I saw how badly the gas had affected people.

I first came to know that UCC was claiming the leak had been caused by sabotage through the newspaper. First they blamed a Sikh terrorist, then a 'disgruntled worker.' They never mentioned any name of a worker, but gave a detailed description of one who was disgruntled due to being transferred to the Sevin plant but who remained 'illegally' in the MIC unit. Immediately, I knew that they were trying to frame me, even though the description did not fully fit. I think this description came after UCC management people and lawyers interviewed ex-workers.

I also gave an interview about my experiences that night. They asked me about my past history with Union Carbide so I told them about my problems regarding confirmation. Then they used this information against me to construct their sabotage theory.

Beyond UCC lies, suggesting that I am to blame, there are other reasons why the sabotage theory is clearly incorrect: it is not possible for any worker to put water directly into the MIC tank as it is a very dangerous job. Further, everyone knows that an MIC–water reaction is very dangerous, not just spoiling, the contents of the tank. So it may be sabotage that caused the leak but not by any worker. If the leak was caused by sabotage, the culprit is the management who was responsible for overseeing the safety of the MIC plant. The leak was a

result of continuous negligence, unsafe handling and a poor warning system.

M. L. Gurjar, Age 39
Industry Inspector, Government of Madhya Pradesh
(Originally employed for alpha-napthol plant)

I joined as a trainee plant operator on 7 February 1977. I received one year of training, then began a probation period as an hourly rated workman. My wage rate was 57 paise [approximately 6½ cents per hour] basic salary. On 7 August 1978, I was confirmed as an hourly rated workman; I stayed in this position until the disaster. I worked in the alpha-napthol plant as an operator, then, when the plant was shut down, I was transferred to the formulation plant as a packer.

When the alpha-napthol plant restarted, I returned there. In 1983, after closure of alpha-napthol plant, I was transferred to the carbon monoxide plant without any transfer letter or proper training. I was asked to work as a regular operator. I joined UCIL along with 50 other operators. Between February 1977 and the disaster, 40 of these operators quit to seek better opportunities at other concerns.

R. R. Verma, Age 37, Bhopal
Industry Inspector, Government of Madhya Pradesh
(Originally hired for Phase II, carbon monoxide and MIC plant)

I joined UCIL on 5 November 1979. After one year of training, I began a probationary period. I was confirmed as an hourly worker on 4 April 1981. I worked in the carbon monoxide plant until the disaster. During a one-year training period, I was given two months of classroom training and three months of on-the-job training and in the remaining seven months, I worked as a regular operator as per management orders. The plant was ready to start but there was a shortage of trained manpower. Trainees were thus used as operators but only paid the wage of a trainee.

When I began in the carbon monoxide plant in 1979, there were three operators, two helpers and one supervisor for each shift; also, there was a production superintendent solely responsible for the carbon monoxide plant. In 1983, each shift had two operators, two helpers (except during night shift) and a supervisor who had responsibility for both the carbon monoxide and MIC plant. The production su-

perintendent and the plant superintendent were also common for both the carbon monoxide and MIC plants.

In 1979, basic qualifications for Phase II was a science graduation or a diploma in either chemical or mechanical engineering. After 1982, many workers with only higher second degrees were transferred into the plant as operators

These Phase II transferees were not properly qualified or given any training. Similarly, the supervisory and other managerial staff were also replaced by transferees with less qualifications and no training. As time passed, there were more and more transfers into Phase II at all levels; none of these transferees were qualified or had any training for their new job. When I joined Union Carbide, I felt it was a good decision. During the classroom training period I remained impressed. But when I was allotted a regular plant operator job after only five months training and on a trainee's wage, I understood my exploitation by UCIL. The treatment of operators by management was in all ways similar to unskilled workers.

I joined UCIL along with 12 training operators; nine of my colleagues had resigned by December 1984 due to bad treatment by management, dangerous working conditions and lack of job security. I also tried to leave Carbide but could not find a suitable job. In my plant, there was no alarm system for automatic detection of a carbon monoxide leak. The only thing to detect a leak was dragger tube testing done after a leak was suspected. This was totally insufficient since carbon monoxide is tasteless, odorless and colorless; there was no way for workers to know they were in danger. Leaks were common at the pressure points. I was, along with my colleagues, exposed to various chemicals like carbon monoxide, MIC, phosgene, monomethylamine, acid fumes and other chemicals that were leaked from my plant and from the MIC and napthol plant. The flare tower was mainly designed for the CO plant to burn off excess CO.

Initially, our factory had a loud siren and a public announcement system to warn outside public and plant personnel, but in 1983, our management modified the loud siren into a muted siren. In case of toxic release, the siren could not be heard outside the plant. During my time at UCIL, I observed a high turnover of workers and officers because the napthol plant was shut down and because UCIL employees quickly came to know that the qualifications gained at UCIL would bring better wages and working conditions at other concerns.

At the time of the 2nd of December disaster, I was at home with my family. I left my house at midnight and reached a safer area in New Bhopal. I heard that UCC had said the disaster was caused by a worker connecting a water hose to the MIC tank; this 'sabotage theory' is totally wrong and baseless. All workers were aware of the violent, dangerous reaction caused by mixing MIC with water.

P. R. Koshe, Age 37
(Token No 4607), Bhopal
Industry Inspector, Government of Madhya Pradesh
(Originally hired as alpha-napthol plant operator)

I joined UCIL in 1978 with a one-year training period with three months in the class room and nine months on the job. Early in my on-the-job training, I was given a position as regular operator but kept the wage rate of a trainee. I was transferred to the formulation plant for about six months while the napthol plant was shut down. Then I came back to the napthol plant when it reopened.

When the napthol plant was permanently shut down, I was transferred to the Sevin plant. I worked in the Sevin plant without any training up to the time of the disaster. We demanded at least one month of training, but it was not provided. We were regularly exposed to MIC, naphtol dust and carbon tetrachloride solvent when the reactor was being charged manually by opening the manhole of the reactor. Chemical leaks were common above the threshold limit value throughout the plant. I was repeatedly exposed to various chemicals; when exposure became unbearable, we closed down the system and left the place of duty for a safety area. I experienced indigestion, choking, giddiness and vomiting while working in the plant.

The facilities provided for worker safety were not sufficient; even work clothes were not provided. Other safety equipment was not provided voluntarily, we had to demand any amount of protection we got. When I was working in the Sevin plant, I was also exposed to leakage from the MIC plant. After the 1982 phosgene leak from the MIC plant, we were very worried about the hazard posed by that plant being so near. As we heard about the corroded pipelines, faulty pumps and valves, faulty instruments and gauges and untrained personnel in the MIC plant, there was more and more panic among us.

I joined along with about 30 trainee operators in 1978. More than 50 percent of them quit UCIL; some were terminated during the training period, some took voluntary retirement after closure of the napthol plant, but most left to seek better opportunity. I also tried to resign from Carbide because the work was very hazardous but I could not get another job.

One reason for resigning was that plant operators working for 10 years were not given promotions; in the history of the Bhopal plant, only one junior MIC operator, K. T. Row, was promoted to production assistant, a managerial-category job.

Through the union we made demands for safer working conditions, to UCIL management and UCC and also both the state and central governments. On 2 December 1984, I was on second shift of Sevin plant and due to a reshuffle of the shift schedule, I also worked first shift. That day I worked for sixteen hours, 6:45 a.m. to 10:45 p.m. When I left Union Carbide at 10:45 p.m. for my home, everything was normal. I took a factory bus to my house; after two hours at home, I was surprised by exposure from the factory.

The newspapers reported that the leak was caused by a 'disgruntled' worker, but I know that the leak was not caused by any worker but by negligent maintenance and poorly trained supervisors. There were so many deaths in Bhopal because they were not informed by either UCIL or the government of the potential for dangerous leaks. Even I, a long time employee, didn't know that a leak of such magnitude could occur until it happened.

S. R. Deshmukh, Age 35, Bhopal
Industry Inspector, Government of Madhya Pradesh
(Originally hired as a timekeeper)

I joined UCIL as a shift timekeeper on 26 June 1983 and worked up to November 1985. On 2 December 1984, I was on night shift. I had completed my work and was sitting in my room. Around 1:00 a.m., I heard a muted siren and went outside to the medical center. I came to know that there was heavy leakage from the MIC plant. After some time, Utility Operator U. S. Teagle came to me to get a pass to go out to start the water pump near Lily Theatre to ensure a continued supply of water to the factory. When he returned to the factory, he said that the outside situation was terrible: that people were fleeing in panic

and dying in the road. The whole of the old city was getting covered by the gas.

Around 1:30 a.m., workers began to flee the factory premises to save their lives. After some time, Plant Superintendent K. V. Setty came to me and asked how many workers had left the factory. I told him that I did not know because they did not stop for proper pass cards. Then he told me to search for MIC Production Assistant S. Qurashi and other staff. We discovered that S. Qurashi was missing; they found him near the boundary wall in a ditch, unconscious. They took him to the dispensary and he came to only the next morning. Around 3:00 a.m., many people from outside came to the factory dispensary for treatment; there was not enough medicine to treat many people even for pain relief. I heard the loud siren continuously at 2:00 a.m, only.

In the month of November, five operators were transferred to the MIC plant and they were allotted work in routine shifts. I came to know this because of changes on the shift board where I placed their cards.

Ramesh Kumar Ahirwar, Age 38, Bhopal
Clerk, Industry Department, Government of Madhya Pradesh

I joined the UCIL formulation plant in 1973. I was confirmed in 1980 after working seven years as a casual worker. When I was working as a casual worker, management only provided me soap and a cotton mask as safety equipment. No clothes were provided to protect me from toxic dust particles. When I went home, my family could clearly smell the insecticides. I usually walked to the factory as there was no bus facility for workers.

When I got a permanent post, I was provided protective overalls but still was exposed to dust and took it home on my clothes. When I was working as a casual worker, I was treated as a bonded laborer. There was no job security; any demand for extra safety led to warnings that we would be terminated.

In 1977, training operators started joining UCIL and were given the same work we were doing as casual workers. I was examined by the UCIL doctor but the report was never given to me.

V. N. Singh, Age 37
(Token No 4554)
Industry Department, Government of Madhya Pradesh
(Originally hired for alpha-napthol plant)

I joined UCIL as a plant trainee 28 March 1977. I had six months of classroom training and six months on the job. I was confirmed on 27 September 1978 and began as a regular operator in the alpha-napthol plant. When we were in training, we thought the alpha-napthol plant was a very sophisticated, continuous manufacturing process. But when we actually started work in the plant, we came to know how badly the plant was run. The whole process was often modified, mainly through conversions from a continuous process to a batch process. Once they shut down the plant for long periods for modifications; even afterwards, the plant did not run successfully. We heard that the napthol plant was declared a failure plant when it was shut down permanently.

While working in the napthol plant, I got exposed to various chemicals so many times. Once, I was burned by hot chemicals coming out from the edge runner, a machine for fusion reaction.

After the shut down of the napthol plant, we were asked to take MIC plant training without any official letter. They started training first in the classroom for two months without ever providing individual copies of the process and safety manuals. The training was just a formality, with no intention of really teaching us anything. Our teachers were MIC plant personnel. After two months, they transferred us to the MIC unit for on-the-job training. After 15 days, management ask us to take independent charge of a regular plant operator's position. At that time, the MIC unit was facing a shortage of manpower.

In the event of any problem or abnormality, I had to take guidance from my colleagues or supervisor. Without their help, I had to stop the work. Most of the original MIC operators had resigned from UCIL; those of us transferred from the napthol plant took charge without proper training.

On 2 December 1984, I was on second shift. I reached the plant at 10:45 p.m. and took charge of the phosgene reaction unit from the previous shift operator, Rehman Khan, who told me that water washing of the phosgene stripping was still in process and that the safety valves downstream were on.

After taking charge, I remained in the plant. Around 11:30 p.m., we felt the strong presence of MIC, causing eye irritation. Some of my colleagues informed the supervisor of the MIC plant. In the meantime, we saw that water was dropping from the second level of the structure and that near that place, there was more evidence of MIC.

After we saw the water, we again informed the supervisor, Shakil Quresi. By this time, it was 12:00 midnight. Quresi told us we would see after tea break. I went back to my unit and stopped the water washing around 12:15 a.m. When I stopped the water washing, all the water from the lines came out through the open bleeders. Near these open bleeders, I also detected MIC. About 12:30 a.m., the supervisor was trying to find the leak but could not. All of a sudden, around 12:50 a.m., they saw that the tank pressure gauge was reading above its range. At the same time, we saw a heavy release from the vent gas scrubber atmospheric line. Then I broke the alarm glass to start the loud factory siren. This was to warn other workers and to call the rescue squad.

After a few minutes, the loud siren was turned into a muted siren. The rescue squad then came to the MIC plant and tried to stop the toxic release by putting large amounts of water spray through fire hydrants. The leak was uncontrollable so that after some time, everyone started to flee from the MIC unit in the opposite wind direction. I also ran away from the MIC plant. At that time, we were not thinking that the Bhopal people would be badly affected by the leak. Only the next day did we come to know of the great harm caused by the toxic release from our factory.

When I heard that UCC said that some disgruntled worker had put water into the tank, I was angry. They only identified this worker as someone who had been recently transferred to the Sevin plant and did not give his name. The only worker to meet this description was M. L. Verma. Verma and I reached the MIC unit together at 10:50 on 2 December and remained together all the time, along with other fellow workers, until we fled from the factory. It is impossible for M. L. Verma to put water into the MIC tank. Also, it is a highly dangerous task to open a valve leading directly into the MIC tank. If M. L. Verma had opened such a valve, he might have been the first victim of the gas.

R. C. Ram, Age 39
Plant Operator
(Originally hired for CO plant)

I joined UCIL on 2nd January 1979 as a trainee plant operator for Phase II. I received seven months of classroom training and five months on the job. During on-the-job training, I worked in the CO plant for pre-commissioning and start-up. I worked in the CO plant until the disaster. I was often exposed to various chemicals. There was a buddy system in my plant as it was highly dangerous. At first, there were two operators in the plant and one operator in the control room for every shift. Thus, no one ever went into the factory alone.

Since 1983, however, they reduced manpower in the CO plant so that there was only one person in the plant and one in the control room. Also, after 1983, the night shift lost its helpers so that the only persons were the field operator and the control room operator. Thus, during the night shift, there could not be any buddy system. I was also a member of the rescue squad. In case of emergency, I had to leave my unit. Thus, if on duty during the night shift when a rescue call came, I had to leave the CO unit completely unattended.

I was worried about the operators transferred into Phase II because they were working without proper training. Along with me, about 40 operators joined UCIL. Out of that, nearly half resigned because there was no promotion policy and a total lack of safety facilities.

On 2 December 1984, I was on first shift. At the, time of the leak, I was at my residence near BHEL, very far from the factory. After the disaster, the Government declared which were the gas-affected areas, and my area was not covered. Thus, I and my family were not considered gas victims. But we should have been considered gas victims since I lost my job because of the disaster. Also, I had been regularly exposed to toxic chemicals during my work. When I came to know that UCC had blamed a worker for the disaster, I thought it impossible. No worker would damage company property or create such a hazard to human life.

Mukund Patharadkar, Age 38
Bombay Dyeing
(Originally hired for alpha-napthol plant)

I joined UCIL, on 13 February 1978 and began one year of training. Then I was confirmed as a regular operator for the alpha-napthol plant. I also worked in the formulation plant and Sevin plant when the alpha-napthol plant was shut down. After permanent closure of alpha-napthol plant, I was transferred to the Sevin plant and worked there until the disaster. When I was working in various plants, I felt that provisions for both personal and plant safety were very good on paper but in practice not up to the mark. Theoretically, full care was taken to use safety equipment, but actual procedures in operating the plant and during mishaps causing emergency conditions were very lax. Also, critical pollution levels in the work area were not regularly checked. Because of these inadequacies in safety procedure and plant design, conditions were often unbearable. Some times the leak of chemicals led to the shutdown of the unit. It was the dedication of Carbide's hourly rated workers that made possible the successful operation of the plant for eight years.

In my opinion, if the Carbide plant in Bhopal had been in a professional industrial belt where workers could have compared their conditions with those in other factories, the plant would not have remained opened for even one month. Only because UCIL management shrewdly kept workers unaware of normal safety standards was its operation continued. The government should have made sure that these standards were enforced. Justice in Bhopal must include government recognition of how Carbide continually victimized the workers. I resigned from UCIL on 25 May 1985, after the disaster and before UCIL had announced the closure of the factory. I joined Bombay Dyeing and Manufacturing Co. Ltd's DMT plant at Patalganga, District Raigad, Maharashtra. After closure of UCIL, all the hourly rated workers got compensation under Section 25 (0) of the Industrial Disputes Act and additional compensation from Union Carbide. However, those of us who anticipated the closure and sought other jobs before the announcement were left out. The M.P. Government offered me a clerical job in the Treasury Department but the salary was too low to maintain my family. Bombay Dyeing is better than UCIL: I got two promotions in just four years, and facilities and safety conditions are better.

P. L. Verma, Age 37
Bombay Dyeing
(Originally hired for alpha-napthol plant)

I joined UCIL as a trainee plant operator on 15 January 1980. I had six months of classroom training and six months on the job. After completion of my training, they extended the training period for six months because the napthol plant was shut down. Thus, Carbide avoided paying us the salary of regular operators. I was confirmed as an hourly rated workman for the napthol plant. I also worked in the formulation plant as a packer for three months. After closure of the alpha-napthol plant, for more than six months we came to the factory for our shifts but had no assignments. Then, UCC conducted a test for instrument technician and I got selected and began training in the Bhopal plant's workshop. Previously, this training was given in the Central Technical Institute, Bombay. At the time of disaster, I was under training. During the training period, I worked under the guidance of senior technicians. When I joined UCIL, I thought it was a reputable concern with sophisticated technology. When I started work, this impression vanished. The alpha-napthol technology failed, and also the general treatment of operating personnel by management was similar to labor-class workers. From the safety point of view, there was a lot of talk and sophisticated propaganda but in fact we were not at all told about the hazardous nature of various chemicals caused by faulty processes.

Accidental leaks from all the units were frequent. My fellow workers and I were often exposed to toxic chemicals above the threshold limit. In general, we were told that MIC exposure treatment was to wash the affected area with large amounts of water.

As there was no promotion policy and job security, mainly for operators, many of my colleagues resigned. Since there was no other concern like UCIL in the Bhopal region, the workers only knew of the problems after they began working in the plant. When I learned that UCC had said that a worker deliberately introduced water to the MIC tank, I knew it was impossible. No worker would do such a thing, because the workers knew about the hazardous nature of MIC.

After closure of the plant, I Joined Bombay Dyeing as a process foreman. Here I feel the working environment is completely different. I got a promotion in 1989 and am now working as a process su-

pervisor. I resigned from UCIL before actual closure of the plant so I was not given any compensation.

P.K. Bhasin, Age 39
Bombay Dyeing
(Originally hired for alpha-napthol plant)

I joined UCIL in February 1978 as a trainee. I received one year of training and then shifted to the alpha-napthol plant, which was soon permanently shut down. I was then shifted to the Sevin plant until the disaster. After training, I was treated just like a labor-class worker. I was also a member of the fire squad. In 1982, I was severely exposed to toxic chemicals when there was a leak of a pump seal in the MIC plant. When they broke the glass cover and started the siren, I went with the fire squad to the MIC plant and was given the task of spraying water on the leaking pump. Because I was so near the leak, I had breathing protection equipment with enough air for 30 minutes. The leak was not stopped within 30 minutes so I should have been replaced by another fire squad member. No replacement came, so when air ran out I opened my mask and began breathing naturally in order not to have to leave my post, thus taking the stream of water off the leak. My body was already exposed to the toxic chemicals so when breathing also became difficult, I had to leave the hose and the contaminated area. I started vomiting and was sent to the hospital. Already, twenty-three other workers had been admitted for exposure to toxic chemicals. For three days I was given treatment but no care was extended for residual or long-term effects.

The company has periodically taken our medical tests but no report has been given to us. Bombay Dyeing is a better company; I already have received a promotion, have quarters, bus service and many other benefits.

V. D. Patil, Age 39
Bombay Dyeing
(Originally hired for MIC plant)

I joined UCIL on 6 November 1978 as part of the first group for the MIC unit. I had eight months of classroom training, one month on the job in the Sevin plant and then began work in pre-commissioning the plant. Out of 32 who joined with me, ten had resigned before the start up of the plant at end of 1979. In 1981, another ten of my colleagues

resigned. In 1982, another ten resigned. Only two persons, myself and R.K. Yadav, remained. My colleagues joined UCIL believing in the name of Union Carbide but when they saw the working conditions, the facilities provided, the promotion policy and the behavior of the management, they realized that they were not up to good standards. We also saw that senior operators from other units were no better off and were being treated like labor-class workers. As my fellow workers are all science graduates and diploma holders, they started planning to leave UCIL soon after joining. As they got other opportunities, they joined other offices or factories. I did not get another opportunity until February 1984, when I was offered a job in Bombay Dyeing as a foreman. I joined Bombay Dyeing and got two promotions in six years. Now I am a plant superintendent and also receiving other benefits I did not have at Union Carbide.

After I joined UCIL, other batches of trainees came and also quickly left. As a result, by 1982 the plant was mostly run by the trainees since many senior operators had resigned. In 1981, they stopped giving training for the MIC unit and transferred operators from other units who did not have training in the MIC process. Up to 1982, the supervisory staff was well trained and did not change too often. After 1982, however, supervisory staff was also transferred in from other units without any additional training. The quality of the operating personnel became worse and worse, and the condition of the plant was also deteriorating.

When I resigned in February 1984, three of the most experienced people in the MIC plant also resigned: MIC plant manager K. D. Balal, production superintendent Satish Khanna and production assistant V. N. Agarwal. Safety manager B.S. Rajpurohit and plant superintendent C.R. Iyer were transferred. No one in the plant had sufficient training and experience, leading to increasingly unsafe conditions. The disaster should have been no surprise to anyone.

In 1980, the manpower for the MIC unit included 13 operators, all qualified and trained; two supervisors; one production superintendent, separate for the MIC unit; and one plant superintendent, separate for the MIC unit. In 1981, operators were reduced to nine, including trainee operators. In 1982, operators were transferred from the Sevin to the MIC plant without proper training. In 1983, operators were reduced to six, mostly untrained and not qualified. There was only one supervisor common to the MIC unit and the CO unit; the plant superintendent was also made common for all units in the

Phase II expansion of the factory. The production superintendent was put in charge of both the CO and MIC units, and the MIC manager was also made common to the MIC and Sevin units.

When I joined UCIL, I thought it was a reputable concern, but with the duration of time my opinion changed. Operators were treated just like the labor class-just like bonded labor. The only difference was that we could leave the work site, so we did as soon as other opportunities came our way. At the beginning, safety instruments and procedures for the MIC unit were relatively good. But as time passed, management became negligent, with more and more untrained personnel put on the job. The safety of the plant and workers became worse and worse.

In 1982, in the storage area, there was a 30-ton refrigeration system which leaked from 22 refrigerant gas through the chiller tube into the MIC storage tank. The MIC was contaminated, but they reprocessed the material and stripped out the refrigerant gas. In 1983, they stopped using 30-ton refrigeration. I heard, through the newspaper, that in May 1984 the refrigerant system was permanently closed down.

At the start up of the plant, we were taking parameter readings every one hour. In 1981, this was changed to every two hours. The phosgene system was provided with a lot of critical instrumentation but because of choking and corrosion, the instruments started frequent malfunctioning. Production was not stopped but continued, bypassing the instruments. There were many major and minor leakages during my time in the MIC plant due to corrosion of lines and equipment, malfunctioning of instruments and unsafe handling of process equipment. After the disaster, I came to know that UCC had accused a disgruntled worker of connecting a water line to the MIC storage tank. This is not possible.

R.K. Yadav, Age 37
Plant Operator
(Originally hired for MIC unit)

I joined UCIL on 16 November 1978 as part of the first batch of operators for the MIC plant. For eight months, I was given classroom training, then on-the-job training for one month. After that, I worked in pre-commissioning and start up of the MIC unit. When I joined Union Carbide, I did not have any knowledge of chemical plants. My

fellow workers were just as new to this kind of work. While working in the MIC plant, I came to know how Carbide management responded to safety issues. I also realized that there was no way for operators at Carbide to advance themselves; there was no promotion policy. Operators were treated just like labor-class workers. We were kept in the hourly rated worker category. Out of 32 men in my training batch, 30 had resigned by 1982.

The MIC plant never ran continuously for as long as one year. In 1981, when the plant was down, UCIL started a refresher course for operators which taught new Standard Operating Procedures. The course was mandatory, and we were charge-sheeted if caught not paying attention. This seemed ridiculous since the theoretical guidelines taught in the classroom were never followed on the job. I questioned the management about the usefulness of the course and their response was to charge-sheet me and cut my salary ten percent. I brought up the punishment with the union and got back my full salary, but nothing was done regarding the usefulness of the course. When I joined Union Carbide, I was a young man of twenty-one years. I saw that unqualified persons ranked as management had access to all facilities and benefits while well-qualified hourly rated workers had no such access.

Although UCIL was a multinational company, they treated their workers like slaves. They never responded to any problem voiced by workers. This is why I joined the union in 1981 and was elected Joint Secretary. The union was called Union Carbide Karmachari Sangh. At first, this union was not recognized, although a majority of workers were with us. I had to work very hard to get the union recognized; otherwise, we would have no platform for negotiations. In 1984, our union was finally recognized. In 1983, we put our demands to the management. We were successful in getting a five-day week, a salary raise, leave traveling concessions and medical facilities.

We also raised safety issues. For this, management formed a safety committee that included workers. However, this committee only had a formal function; it made no difference to safety on the shop floor. Issues did get raised with the Corporation and the Government, but still nothing changed. Agitation regarding safety was stopped by fixing an inquiry commission. Through this commission, UCIL appeared to be responsive to the concerns of the workers, but in fact it was just a show. The commission never made any real inquires or brought about any real change in working conditions.

R. D. Singh, Age 39
(Token No 4128)
Industry Department, Government of Madhya Pradesh
(Originally hired for Sevin plant)

I joined UCIL on 11 August 1975. I was to have one year of training, but this was extended to eighteen months because the Sevin unit was not ready for start up. After six months of classroom training, we were sent to the Sirmet pilot plant for on-the-job training. After only two weeks of on-the-job training, we were used as regular operators and workers for the pilot and formulation plant. They continued to pay us a trainee's stipend but used us as full-fledged operators, even though we did not have proper training for this job. In this period, I did all kinds of work, from that of an operator to that of an unskilled laborer.

When they started the Sevin plant, I began as an operator. I was transferred to the napthol plant and then back to the Sevin plant. In 1979, I was standing in front of the control room without wearing a safety helmet. The production superintendent told me that I should be wearing a safety helmet. I replied that I was not working out in the plant and that my helmet was in the control room. For this, I was going to be fired. But then I questioned why he wasn't wearing a helmet, and he just transferred me to Utilities.

Until the disaster, I worked in the Utilities section of the plant. On that day, I was on the night shift in the Utilities area, a few yards away from the MIC plant. I reported around 10:45 p.m. and took charge of my unit. I was performing my duties and about 11:15 p.m. I felt mild irritation of MIC in the downtherm* control room as the window was open. At first, I was not concerned, but when the irritation increased, I went to the tea room serving the air compressor unit to get away from the irritation. The room was air tight so there were no vapors.

Around 12:30 a.m., when I came out from the room, I felt MIC vapors in more concentration. I took a breathing air cylinder and tried to get more information on the MIC leak by phone. In the meantime, around 12:50 a.m., the MIC leak could be seen coming from the top of the vent gas scrubber. Also, the siren began to sound. I left the Utility area, as the irritation was unbearable.

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* A unit similar to a steam boiler. Downtherm is used as a heat exchanger.

I came back to the unit after fitting a breathing air cylinder. Then, I was asked to monitor the raw water tank level since the operator of the water treatment area had gone to start the pump outside the plant. The fire and rescue squad was trying to control the toxic release with water spraying, but the condition was getting worse so almost everyone left the MIC plant area to save their lives. This included the MIC plant operator. Only some of the members of the fire squad remained, spraying water until the end of the toxic release.

The MIC supervisor was lying near the boundary wall of the plant. I saw him and informed the plant superintendent. He sent two other workers with me, and we brought him to the dispensary. He was injured as he jumped the boundary wall. The leak stopped at around 2:30 a.m. During the leak, everyone left the MIC plant but me, the utility supervisor and the fire truck operator, Verma. Other personnel came back when the leak stopped. Then I went to the factory dispensary as there were many people from outside the plant coming in for treatment. Higher management authorities who were present were asking the people to go to the government hospital. I argued with the man in charge that he must allow these people to get treatment because their suffering was caused by a leak from our plant. Then I helped in providing first aid.

In the morning, about 7:00 a.m., I went to the MIC plant because I learned that it was a storage tank that had leaked. I saw that the concrete cover of storage tank 610 was cracked. MIC plant manager S. P. Choudhry, a maintenance supervisor and some maintenance workers were working on the tank. I saw that both pressure gauges were twisted out of range. Also, when I touched the tank manhole, it was very hot. Then I came to know that all the MIC from the storage tank had leaked because the temperature had gone above the boiling point. There was no morning bus to take workers home from the night shift so I did not leave until almost 11:00 a.m. Then I saw that all of old Bhopal had been affected by the leak.

Syam Pancholi, Age 44
Agent, Life Insurance Corporation of India
Plant Operator

I joined UCIL in September 1975 as a trainee plant operator. I was to have one year of training but this was extended to 18 months. Instead of on-the-job training, I worked in the formulation plant and other

places in all kinds of labor-class jobs – cleaning out an old swimming pool, cleaning the guest rooms, sweeping, etc. When working in the Sirmet and formulation plants, we worked alongside unskilled workers without any safety equipment – no gloves, no protective clothing, no gum boots or safety shoes. Although these areas were very polluted, the only safety equipment we got were goggles, and these only after many demands.

In a safety meeting in the formulation plant, I raised some points listed in the pamphlet, including when the product was sold. This pamphlet, describing proper use of the insecticides, listed many safety precautions. I demanded that workers in the plant at least be able to follow these precautions. Management told me that this pamphlet was not important and that I should not worry that these chemicals would harm my health. I heard that management later told other workers not to bring me to safety meetings. I was a trainee so I could not take part in union activity nor did I have a right to attend safety meetings. I was then transferred to the Sirmet pilot plant.

In the Sirmet plant, I was asked to clean out the acid pit and the waste pond. There I was exposed to acid and other chemicals. We discussed the situation with the safety manager, B. S. Rajpurohit. He took some action against our immediate boss, telling him that trainee operators should not be used for cleaning the pit. I often felt sick while working in the Sirmet plant, and had to take three months leave due to infectious hepatitis. In June 1977, the Sevin plant was ready for start up. Working there during pre-commissioning and start up, I was exposed to MIC and other chemicals. As the sophisticated design failed to control process leaks into the atmosphere, the exposure of workers was quite regular. Because of operating problems, the napthol charging system was closed down and direct charging was done through a manhole. This change to manual process caused workers to be directly exposed to napthol.

During one napthol charging when I was on duty, one helper dropped a bag into the manhole. He tried to retrieve the bag by lowering himself into the manhole and grasping the bag with his feet. He was caught by the Sevin supervisor and we both had complaints made against us. I was orally told that due to unsafe procedures, I could be terminated. I was very worried about my future being affected by a firing, so I made the decision to resign. Today, I feel it was a good decision to resign from Union Carbide. Everything about working at Carbide was hazardous to health.

The unsafe procedures during the napthol charging was not the real reason for my termination. My termination was due to the way I spoke out about safety conditions in the plant. I had been warned by the management about taking part in union activity and offered a better future if I kept my mouth shut. After my resignation from Union Carbide, I took up work with life insurance and now have a good position. I got married in 1978 and had a daughter in 1981. My daughter is deaf and dumb. My daughter's problem may be caused by my toxic exposure while working at Union Carbide. I still suffer from various ailments but have no proof that it was caused by chemical exposure.

When I heard of UCC's sabotage theory, I thought of the way they had blamed me for the unsafe procedures in napthol charging. I was blamed for the unsafe activity of one worker while the real cause was negligent operating procedures that had been put in place by management. The sabotage theory regarding the gas leak also tried to shift blame to one worker while the real cause was a long history of neglect and unsafe operating procedures imposed by Union Carbide management.

M.S. Thakur, Age 38
State Bank of India
Plant Operator

I joined Union Carbide in September 1975 as a trainee. During the training period, I was sent to the Sirmet pilot plant and Carbide Research and Development Center in Shyamala Hills. Along with Pancholi, I worked as unskilled labor – cleaning mud, throwing stones, clearing garbage. In the Sirmet plant, we were not provided even basic safety. When I was in the Sirmet plant, just at the end of my probation period before confirmation, I resigned from Union Carbide. I resigned because Union Carbide has very hazardous working conditions and because operators are treated like unskilled labor

On 25 January 1977, I was exposed to chlorobenzyle chloride, a very dangerous chemical. Due to that exposure, my face got a chemical burn and my body was otherwise affected. UCIL did nothing for my treatment. They made an incident report and said that it was because of my mistake. The management wanted to continue my duty even though I was sick. They said that if I was absent, they would have a manhour loss due to an accident and their safety record would

be spoiled. The management was planning to terminate me but I did not want to work further with Union Carbide.

I sought a job outside the chemical industry and finally got a position in the State Bank of India. After resigning from Union Carbide, I still got exposed due to their neglect – when at home on the night of the disaster. I was a victim twice: once on 25 January 1977 inside the factory; once outside the factory on 3 December 1984. I thought I had severed myself from Carbide's abuse but they would not let me escape.

I also heard about the sabotage theory. It was another case of their trying to blame workers for their negligent procedures imposed by management. Just like in my own accident in 1977, Carbide in 1984 was trying to escape blame. It does not care about the well-being of those affected by their negligence. I was thinking that UCIL must help the victims of their negligence on humanitarian grounds, but they did not.

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10

Bhopal Ten Years After

Claude Alvares

EVERY YEAR, IN the first week of December, almost religiously, several of us journalists have traveled to Bhopal to report on the condition of the victims of the 'world's worst industrial disaster.' Rarely have we come away cheerful.

Now, after ten years of exposure to the goings-on in Bhopal, and seeing where it all seems to have ended, we have lost faith in our own written words, having been compelled to acknowledge the pointlessness of our reports and descriptions. The requirement of the hour is no longer further exposure, but concealment: we now have to find ways to conceal our shame.

In the decade-long aftermath of this obscene and hideous event, a singular gift of a modern multinational corporation that relied on primitive operating practices, there is no possibility of talking in terms of even a balance sheet, for all that one can see is an ever-increasing load of millstones that have drowned any ideas the human race might have had of 'progress'. However, since we are all rapidly becoming victims of the 'new world order', it is important to check out what's in store for us by examining how the established system – particularly in a country like India – has responded to caring for the Bhopal disaster victims over these ten long years.

There are several significant aspects which we must examine and of which we have an adequate enough record.*

From the victims' point of view, there have been four related issues which link them continuously and involuntarily to the disaster. The first of these is the medical management of the damage to health created by exposure to toxic MIC and other chemical gases. The second relates to interim and long-term compensation and damages for death and injury caused by the gas event. The third concerns the rehabilitation of those who were disabled by the disaster in different ways. The fourth is the interplay of the government, law and courts with these three.

All four make the Bhopal gas disaster and its aftermath a singularly terrifying event in human history. As Praful Bidwai, the distinguished journalist who has closely followed the misfortunes of the gas victims over the decade, put it: 'The world over, Bhopal quickly became a household word synonymous with industrial catastrophe, gory death, man-made ecological disaster, hazardous technology run amuck, and the horrifying consequences of the multinational pursuit of profit.' For the victims, it became a halfway condition between life and death – instituting years of destitution, misery, humiliation, pain, frustration and hopelessness.

The bright spark which remained undimmed throughout the ten years was a struggle sustained in one way or another by the victims – mostly women – not only for a just compensation, but also to get killer Union Carbide to book for the enormity of its criminal actions. It is this struggle, seen in the context of the bureaucratic unconcern of the governments of Madhya Pradesh (MP) and India and the almost continuous efforts of Union Carbide to wash its hands of major responsibility for the disaster itself, that sets the general tone of what has happened during the past ten years.

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* There are, of course, other aspects of the gas disaster about which it might be useful to know in a book of this kind. However, the documentation could take several years and substantial resources. For instance, we have inadequate information on the impact of the disaster on the legislative and executive imagination of countries and their governments worldwide. Neither do we have a comprehensive listing of steps taken everywhere to prevent the recurrence of such macabre events. Some specific information in this direction is available for the first three to four year period after the disaster, in Martin Abraham's book, *The Lessons of Bhopal*. How the legal system in India responded to the disaster and the rights of the victims is dealt with in detail by Ms Indira Jaising in a companion essay later in this volume.

As the record that unfolds below shows, in no given year was the Bhopal disaster ever forgotten; it remained vividly in the public imagination as either a legal event or as a medical story or a historic tragedy. Every anniversary brought fresh accounts of either one or another of these aspects. But the general outline has remained faithfully unchanged over these ten years. And this is the reason why *The Illustrated Weekly of India,* on the very first anniversary of the disaster, presciently made bold to speak about the 'greater Bhopal tragedy': without minimizing in any way Union Carbide's festival of death which occurred over a few hours, the greater Bhopal tragedy has played itself out over ten years already – and there is still no end in sight.

THE FIRST YEAR AFTER (1984–1985): The Greater Bhopal Tragedy Commences

By the first anniversary, on 3 December 1985, it was more than apparent to the Indian government that Bhopal was a major problem on its hands with which it was steadily failing to cope. The victims witnessed neither speed nor selflessness nor competence nor compassion from those appointed to manage and alleviate their condition. Their country was already furnishing evidence that it was unwilling – though not incompetent – to respond to the consequences of such accidents with the measure of sustained involvement that they demand. One of the most important reasons for this paralysis of action in Bhopal was the fact that the majority of the victims were poor and, in addition, from the minority community.

On 23 June 1985, six months after the Bhopal gas leak occurred, an *Air India* Jumbo airliner crashed off the coast of Ireland. The relatives of all the 300-odd victims received compensation of nearly one million rupees each and the Government of India (GoI) mounted a multi-million dollar expedition to recover parts of the plane from the bottom of the sea.

However, in the case of the Bhopal disaster, not all the relatives of those officially declared dead had been compensated – even if only with the nominal Rs.10,000 set aside for the purpose by the end of the first anniversary: the Relief Commissioner's specious excuse was that the relatives were not coming forward to take the money!

The callous and ad-hoc nature of the state government's approach to the problem of rehabilitation of these disabled gas victims is evident from an elementary scrutiny of its relief and rehabilitation plans.

Shortly after the disaster, the state government, under Chief Minister Arjun Singh, had taken a decision to give free rations to the gas-affected people. Though the affected population at that time was 2,50,000, as many as 7,00,000 fresh ration cards were liberally distributed and a sum of Rs.2 crore was spent every month in this way on the scheme. Despite widespread corruption, the free rations did reach a majority of the gas victims and helped to mitigate, somewhat, their acute problem of survival. But the Government was already proposing to end such doles, leaving the victims to fend for themselves.

A few rehabilitation centers had been set up by the administration, but these were exclusively for women. The bureaucrats in charge argued that rehabilitation centers for men were pointless as they were bound to fritter away income on drink. There were, therefore, no rehabilitation schemes for men.

A large proportion of the victims whose monthly income was less than Rs.500 (approx US$40) were promised spot cash relief of Rs.1500 (approx US$125), but since there was already widespread corruption (the favorites of the ruling Congress party distributing the sums among their own deserving cadres), the scheme was discontinued forthwith till a fresh survey of the victims could be made.

There was not much more on the cards for the victims. But grandiose plans for the rehabilitation of the city – to be financed from the victims' future compensation money were already afoot. In September, the government announced a Rs.322 crore (approx US$270 million) plan for 'rehabilitation' – which included sums set aside for beautifying the city of Bhopal, constructing a golf course, a swimming pool, a new airport, railway station and bus terminal, in addition to other urban infrastructural facilities.

When there was widespread and angry criticism of the plan, on the grounds that the gas victims did not figure in it anywhere, the government hastily withdrew it and dropped the offending features like the airport and swimming pool and scaled down the estimate to Rs.170 crore (approx US$140 million).

Within months after the disaster, the GoI issued an ordinance appointing itself as the sole representative of the victims for any legal dealings with Union Carbide as regards compensation. The ordinance

was later replaced by the Bhopal Gas Leak (Processing of Claims) Act, 1985. Armed with this power, the GoI filed its expected suit for compensation and damages against Union Carbide in the United States District Court for the Southern District of New York.

Besides filing the suit, one of its prime responsibilities was to register the claims of each and every gas victim in Bhopal. This job was never done, or rather, not with any seriousness, for the next ten years. A significant number of gas victims complained, in the very first year itself, that they had not been registered as victims, despite several efforts on their part. The casualness with which the administration approached the task eventually undermined the very cause of the gas victims in the long run: it was on this haphazard categorization of victims that the infamous settlement of February 1989 would eventually be based.

What really dominated the situation in Bhopal in the first year, however, was not so much the suit the GoI had brought against Union Carbide before Judge Keenan's Court in New York and the prospect of huge amounts of compensation promised by American lawyers who had descended on Bhopal, but the medical management of the victims.

A walk by this writer, in late October 1985, through most of the affected hutment colonies and residential areas overpowered by the gases, elicited widespread and consistent reporting of a range of symptoms. These included fatigue, breathlessness, cough, chest pains, blurring of vision, unusual discharges in women, impotence in men, loss of memory, lack of appetite, fullness of stomach, pain in muscles and joints, and depression.

The most important single consequence of such unrelieved symptoms was an inability to resume work and earn a living. Since most of the affected people were poor and, prior to the accident, worked largely as wage laborers, the gas poisoning of their bodies had turned them into a new category of unemployable workers.

The Indian Council of Medical Research (ICMR) had commenced funding of twenty projects to address the health effects of the gas poisoning. Yet, despite uncontested evidence that hydrogen cyanide had escaped from the tank together with MIC, and an ICMR recommendation that long term chronic cyanide poisoning was suspected, precious little was done to begin a mass-scale detoxification campaign using the antidote sodium thiosulphate (NaTS), as recommended not

just by toxicologists, but by the ICMR itself. In fact, most of the year was spent on a series of discussions, moves and counter-moves regarding the administration of the antidote. A 'controversy' surrounding NaTS was successfully created, putting most doctors off its administration.

In the absence of any firm directives, doctors and private practitioners pumped the victims with four kinds of drugs: antibiotics, bronchodilators, antacids and corticosteroids. They would continue this 'symptomatic treatment' for the next decade. Naturally, there has been no monitoring of the large-scale and uncritical use of these drugs, some of which have known and serious side-effects. There is evidence that some victims today are suffering from the aftereffects of the intake of steroids, in addition to disabilities inflicted by the toxic gases.

Thus, even a year after the disaster, few of the victims knew what was wrong with their bodies. Or whether they would suffer lifelong disability. They had nobody to tell them, authoritatively.

To the contrary, government doctors claimed the victims had already recovered, and that they were coming to the clinics because they were 'malingerers,' who only wanted compensation.

Some claimed the victims were no longer suffering toxic gas effects, and that their symptoms were of illnesses they had contracted before the gas disaster. 'Research studies' were actually fabricating data: babies stillborn were being passed off as 'inevitable abortions'.

Another standard response related to the problem of impaired vision. The officials kept claiming that no one had gone blind. The actual fact was that thousands of people had to queue up for glasses and spectacles, most paying for them out of their own pockets.

Patients attending specially set up polyclinics and hospital wards were treated with apathy, and sometimes, plain hostility. During a surprise visit in September, MP's chief minister found four doctors absent from a polyclinic and had to suspend them 'on the spot'. A special committee sent by the then prime minister, Rajiv Gandhi, in August, to investigate charges of incompetence in relief and rehabilitation programs, concluded that medical facilities were 'woefully inadequate'. The government set aside 30 beds in the DIG bungalow hospital, and another 60 beds in the Hamidia hospital for the victims. It was also constructing a 100-bed hospital near the Carbide factory. Yet, no clear picture emerged of any systematic or organized treatment for the mass of victims.

The only hopeful glimmer on the horizon was the spontaneous eruption of NGOs, comprising mostly young social activists and doctors. These included *Zahreeli Gas Kand Sangharsh Morcha* (known later by its short form – *Morcha*), *Nagrik Rahat Aur Punarvas Samiti (NRPS), Rastriya Abhiyan Samiti* (RAS), and *Jan Swasthya Samiti* (JSS). The state government however refused to take kindly to their efforts. It attempted to harass them instead.

The MP government, in fact, arrested sympathetic demonstrators blocking railway tracks to press demands for relief as early as January. In May, gas victims, mainly women, holding a demonstration, were beaten up by the Bhopal police. In early June, gas victims and activist groups were beaten up by police in front of the Union Carbide plant. Later that month, on 24 June, voluntary doctors administering NATS to poor victims were arrested by the police and their clinic shut down. The clinic was reopened after the Supreme Court intervened.

Activists were intimidated or arrested. Some of those belonging to the *NRPS* and the *Morcha* were even charged with murder in order to dissuade them from remaining in the city. It was only after senior citizens and editors in Bhopal went in a delegation to the chief minister, protesting such arrests, that the government went slow on the cases.

The government set up various enquiry commissions to go investigate the causes of the disaster: they remained halfhearted initiatives at best. The one-man inquiry commission, headed by a judge, folded up a year later without producing any worthwhile inquiry. The Indian toxicologist, Dr.C.R. Krishnamurthy, heading the special scientific committee to go into all the questions raised by the gas disaster and its aftermath, confessed he did not have access to even a typewriter to begin his work.

Union Carbide, on the other hand, moved more quickly with its 'investigations': it announced by March 1985 itself, that the disaster was due to 'an act of sabotage' by a Sikh terrorist. Its Indian subsidiary, Union Carbide India Ltd. (UCIL), used the excuse of the closure of the plant to reach a settlement on 3 December 1985 with its 627 retrenched workers for a final amount of US$1.8 million.

Gas victims had therefore adequate reason to be angry, upset and bitter on the first anniversary of the gas disaster. The city shut itself on that day. Decorum was maintained in the morning as prayer meet-

ings were held in mosques, temples and churches. But, later in the day, processions and morchas packed with angry mobs choked the city's narrow lanes, yelling for Warren Anderson's blood. Effigies were burned on the streets. Attempts were made to invade the factory and raze it to ashes.

Every year thereafter, the citizens of Bhopal would maintain this regime: of prayers for the departed in the morning and curses thereafter, for the perpetrators of the terrible disaster: Anderson, Union Carbide and its officials. And as the years folded upon each other, more would be added to the list, including doctors and lawyers and judges – and the Indian government and the MP government ... and many more...

THE SECOND YEAR AFTER (1985–1986): The Struggle for Relief and Rehabilitation

Two years after the disaster, Praful Bidwai wrote depressingly in *The Times of India*: 'For the Bhopal victim, what can be more telling than that, even today, he or she must walk a mile or more and then queue up for hours before having the privilege of seeing an indifferent and incompetent doctor for whom the patient is no longer even a guinea pig.'

Bidwai also noted that the so-called 100-bed hospital which was supposed to be 'the most spectacular monument of the MP government's concern for the gas victims' was still to be completed and become functional nine months after a scheduled date of opening which already had been postponed twice.

The 'rehabilitation' program for children of the *bastis* (slums or colonies) was based on 30-odd *anganwadis* (child care centers) which were described as being no better than small *kothadis* (dungeons) where the children were treated like dogs and fed one slice of bread a day. Less than one-tenth of those in need of rehabilitation figured in the government's program and detailed medical documentation at this stage existed in respect of less than 4% of those affected.

The second year after the disaster was also a turbulent year for Union Carbide since it had to defend itself against a takeover bid by a smaller company called GAF.

Was there any connection between GAF and Union Carbide in the takeover drama? Was the takeover battle a put-on for public con-

sumption? Whatever the intriguing possibilities, it is clear that as a result of the 'battle', not only was Union Carbide able to divest itself of assets sufficiently to file a bankruptcy claim under US laws – as John Mansville had done when faced with compensation claims in US asbestosis suits – thus effectively blocking any order of compensation from Bhopal, if and when the suit was decreed, but GAF walked off with US$81 million even though the takeover failed.

In addition, Union Carbide shareholders emerged richer with dividends worth more than what they had before the gas leak disaster!

The gas victims figured nowhere in this scenario. To make things worse, on 12 May 1986, Judge J.F. Keenan ruled that India and not the US was the appropriate forum for the Bhopal compensation litigation.

As a consequence of Judge Keenan's order, the Indian government filed a suit against Union Carbide in the Bhopal District Court on 5 September 1986, claiming damages in excess of US$3 billion. Shortly thereafter, the District Court granted a temporary injunction restraining the multinational from selling any more of its assets. On 1 December, the injunction was lifted after Union Carbide gave an undertaking to the Court that it would maintain assets of US$3 billion in the US pending the final determination of the suit.

In November, Union Carbide also filed a counter-suit in the same Court, holding the Union of India and the MP government responsible for the gas tragedy.

Before all this had happened, however, the Bhopal case had already reached the portals of the Supreme Court of India.

The intervention came in the form of a writ petition filed by two gas victims and their physician, Dr Nishith Vora who had, with NGOs, been manning a clinic which administered NATS as an antidote to gas victims. The clinic had been shut down by the Bhopal police. The Supreme Court intervention not merely enabled Dr Vora to get his clinic reopened but also to get stocks of NATS released to the clinic by the MP government.

But the Supreme Court went further: it appointed an 'expert committee', whose decision would be final and binding, to prepare a scheme of medical relief including detoxification of gas victims by NATS and to arrange for monitoring of medical relief, for epidemio-

logical survey and house-to-house survey 'necessary for the purpose of determining the compensation payable to the gas-affected victims and their families.'

Apart from these happenings, NGO groups in both Bhopal and Delhi maintained pressure on the local government administration throughout the year. RAS submitted a memorandum to the prime minister strongly criticizing the government for shying away from setting up special courts to ensure speedy justice for the victims, and for not providing appropriate medical facilities. It also demanded compulsory postmortems on all deaths in gas-affected localities. On 12 June 1986, the *Morcha* also submitted a memorandum to the Supreme Court's expert committee. The memorandum demanded, besides epidemiological surveys and compulsory postmortems, a clear division of localities hit by the gas.

The *Morcha* had already, through agitation, forced the state government to raise the stipends of trainees at work sheds set up as part of rehabilitation actions, from Rs.75 to Rs.150 per month by June 1986.

Together with other victim-oriented groups, the *Morcha* set up the Jan Swasthya Kendra (People's Health Center). The Jan Swasthya Kendra organized a six-day medical camp at Budhwara, a small locality of gas-affected people, from 25 October to 31 October, in which more than a dozen public spirited doctors examined 417 gas victims. The Kendra also conceived of a new health card which not only monitored medical programs but also registered details about more than 30 persistent symptoms including information on reduced working capacity and deaths, abortions and stillbirths in the families of victims. Eventually, it came to pass that this initiative – on health cards for each victim – could not be maintained. The idea would be resurrected eight years later by the International Medical Commission led by Dr Rosalie Bertell which visited Bhopal in January 1994.

THE THIRD YEAR AFTER (1986–1987): An Unholy And Unjust Settlement Is Scorched

Throughout 1987, the media concentrated mainly on efforts to reach an out-of-court settlement between Union Carbide and the GoI. (A detailed description of the failure of these efforts is provided by Kesava Menon in *Frontline*: November 28 – December 11, 1987). It is interesting to note here, however, that these attempts at a settlement – already, at this preliminary stage – contained the main features of the settlement

that the Supreme Court of India would eventually sanction by its order dated 14–15 February 1989.

The suggestion 'to settle' was made by Judge M.W. Deo when the suit hearings began in the Bhopal District Court. The judge was only echoing American Judge Keenan's observation (made earlier, in 1985) that a settlement would be in the best interests of the victims.

By 30 October 1987, both Union Carbide and the Indian government were already expressing their optimism and assured the Court that they were making serious efforts in this direction. To prepare the public, Union Carbide even launched a propaganda blitz. Several eminent persons, including jurist Nani Palkivala, and the former Supreme Court Chief Justice, Y.V. Chandrachud, made statements lauding the efforts being made to arrive at a settlement.

The reason for mooting a settlement at this stage seemed valid enough: preliminary procedural matters had already been completed in the Bhopal District Court and the Court was at the stage at which the actual trial was about to commence. It was assumed that, once the case was committed to trial, it could go on for several years and the prospect of compensation for the victims would be considerably diminished in terms of time.

According to reports, the main elements of the settlement being worked out were that Union Carbide would pay the Indian government around US$500 million as full and final compensation for the disaster. As part of the package, however, the Indian government would drop all legal proceedings – including criminal charges against Union Carbide.

Naturally, when these details leaked out in the press, there was a national and international furor. Hundreds of women victims staged a day-long *dharna* (protest sit-in) at New Delhi's boat club against the proposed deal. Several eminent critics condemned the scandalous proposal and even those arguing for a settlement were appalled by the terms being offered. Rallies were organized both in Bhopal and Delhi and the settlement was denounced in the Lok Sabha, India's Parliament. From America, consumer activist Ralph Nader wrote to prime minister Rajiv Gandhi, adding his voice of protest to those of the rest.

The massive protest effectively killed the 'settlement'.

In November, when the case was called up in Judge Deo's court, he was informed that talks towards the 'settlement' had failed. While Anil Dewan, Union Carbide's counsel, sought to assure the judge that serious talks were still going on, India's Attorney General did not endorse that view. Judge Deo expressed his distress at the information and proceeded to fix the next trial date for 27 November 1987.

Approximately twenty days thereafter, on an application filed by a lawyer, Vibhuti Jha, on behalf of one of the gas victims, Judge Deo would pass his famous order directing Union Carbide to pay Rs.350 crore (US$270 million) as interim relief to the gas victims. The irony is that it is this very order of interim relief that would end up eventually in the Supreme Court (on appeal) where, on 14–15 February 1989, the apex court would direct a settlement that had already failed after an entire year of negotiations in 1987 itself – and for the lesser amount of US$470 million.

The only other significant development of the year was the submission of the C.R. Krishnamurthy Commission Report. The Commission had been appointed in August 1985 to go into the long-term effects of MIC on living systems and ecology.

Dr Krishnamurthy's main disclosure was that 'after two years of studies, we are not sure of what cloud descended on that fateful night.' He said he was personally not satisfied with the amount of work undertaken by the Commission. But the Commission had recommended legislative measures to prevent recurrence of such disasters.

Nothing has been heard of the Commission's report ever since.

THE FOURTH YEAR AFTER (1987–1988): A Landmark Judgment On Interim Relief

On 17 December 1987, Judge Deo passed his significant order directing Union Carbide to cough up Rs.350 crore as interim relief.

(According to *India Today*, the government appeared to have been prepared for Judge Deo's order. In fact, on the eve of the verdict, MP's public relations department arranged for the judge to be photographed, so that his picture could be circulated to newspapers. Arrangements were also made, departing from normal custom, to allow TV crews and press photographers to enter the courtroom.)

As rumors of the judgment spread around the city of Bhopal, many victims broke into tears of joy. Men smeared each other with

gulal (colored powder) and women applied *tikka* (anointment of forehead). Judge Deo had recommended that interim relief should be about Rs.2 lakh in the case of death, Rs.1 lakh in cases of permanent disabilities, and smaller amounts for those with lesser injuries.

The order was unprecedented and was decidedly controversial. Being an interim order, it could not be decreed. And without a decree Union Carbide could – and did – refuse to pay it. Some gas victims, faced with what they thought was an unenforceable order, even began blaming the 'innovativeness' of the judge. However, it is not as if Union Carbide was aghast at the idea of interim relief – earlier, the corporation had agreed to some sort of interim relief; on 17 August 1987 it had offered Rs.2.1 crore; later it had even upped this to around Rs.60 crore.

Ironically, even as Judge Deo ordered interim relief, work was suddenly stopped at various rehabilitation centers employing around 1750 gas-affected women in Bhopal.

Union Carbide soon challenged the order of the district judge before the MP High Court at Jabalpur on the grounds that the trial judge was not authorized to pass the order under any provisions of the Indian Civil Procedure Code. Carbide's spokesman, in a brief statement, noted that the Court's order would merely delay ultimate resolution of victims' concerns by introducing a new and unenforceable concept of law.

On 4 April, Justice S.K. Seth of the High Court upheld the liability of Union Carbide for the Bhopal disaster, but reduced the interim compensation to Rs.250 crore. The money was described in the order as 'interim payment of damages' and the judge directed the Union of India to execute the order as if it were 'a decree passed in its favor.' Justice Seth differed from Judge Deo by holding that the money Union Carbide would pay was not payment of interim relief without reference to the merits of the case as held by the trial court, but a payment as damages under the substantive law of Torts. Basing himself on a Supreme Court judgment, the judge held that the measure of damages payable had to be co-related to the magnitude and capacity of the enterprise.

On 11 October, a review petition filed by Union Carbide against Justice Seth's order was dismissed by the same High Court. But two days later, the High Court also accepted Union Carbide's plea to transfer the case from the Bhopal district judge's court to the court of the

senior most additional judge. This order was, in turn, challenged in a special leave petition by the Union of India in the Supreme Court.

In September, the Supreme Court admitted two cross appeals filed by the Union of India and Union Carbide against Justice Seth's order. The Court also directed that all other matters pending before it in connection with the tragedy be tagged on for combined hearing. On an application, only the *Morcha* was allowed to become an intervener in the proceedings: the Court ruled it would allow no further parties.

Meanwhile, in Bhopal, as a spin-off of litigation against Union Carbide in the US, the Union of India sought an injunction from Bhopal District Judge Deo restraining Union Carbide from compromising or settling any individual compensation claims filed in the US Courts in connection with the tragedy. Apparently, Union Carbide had contended before the Supreme Court of Connecticut that suits filed by individual plaintiffs should remain there. Union Carbide was also asked to produce a transcript of the proceedings in the Connecticut court.

Union Carbide, for its part, filed three new applications in the Bhopal District Court in October. One of these was to allow the company full mutual discovery and inspection of documents. The second was to furnish all the relevant particulars of all the gas victims as duly processed already under the Bhopal Act. Union Carbide maintained that the 57 volumes of documentation on the five lakh claimants supplied by the Indian government were inadequate. In its third application, Union Carbide demanded that an affidavit filed by an individual claimant in the Connecticut Court, Robert M. Watson, should not be taken on record in the Bhopal court's proceedings.

While these legal proceedings went on, Carbide vigorously pursued other strategies outside the courtroom that, it hoped, would, by themselves, have a direct impact on the trial. One of these moves included further shoring up of Union Carbide's 'sabotage' claim. In the second week of May, a private consultant organization in the US hired by Union Carbide, Arthur D. Little Inc., released a report which claimed that sabotage by a disgruntled employee – and not company negligence – had actually caused the deadly disaster on 2–3 December 1994. The report provided no motive for the sabotage nor did it name the worker. A Union Carbide attorney went on to claim that both, the company and the Indian government, knew the worker's identity and that, eventually, it would be revealed in court.

Within two months, the International Coalition for Justice in Bhopal countered the Carbide propaganda by releasing two special reports. In its first report, the coalition examined Union Carbide's allegation of sabotage, and branded the story as a public relations ploy intended to portray the company as a victim and to divert attention from the real causes of the disaster: the faulty design and operation of the plant. The second report, which examined the status of interim payments to the victims, described Union Carbide's refusal to pay up the money as gross contempt of court and the Indian Court system.

What was happening to the gas victims in the meanwhile? In a written reply to the MP state assembly in September, the Minister of State for Bhopal Gas Relief and Rehabilitation admitted that his government was still gathering information regarding the tragedy and its fallout, nearly four years after the event! According to him, information was also being collected on whether any areas of new Bhopal could also be recognized as gas-affected.

The *Morcha* informed the press that the government of MP had submitted a seven-year plan for expenditure of Rs.371 crore for rehabilitation of the Bhopal victims to GoI's Finance Commission. If implemented, this would mean an expense of only Rs.1.11 on each victim, 60 paise of which would go to administrative costs.

The organization claimed it had submitted, instead, a parallel plan to the chairman of the Commission demanding an expenditure of Rs.3,079 crore over the next seven years and Rs.5,971.94 crore over the next twenty years on the basis of the experience of the Hiroshima victims. The *Morcha* demanded that if the government could not pay this money out of its own coffers, it should appeal to countries worldwide since Bhopal was a tragedy 'not just of a single place but of the whole world.'

It was earlier noted that the Supreme Court had appointed an expert committee (in 1986) to monitor medical relief and to prepare a medical rehabilitation plan. It appears that after a year of functioning, the official members of the committee – constituting the majority – decided 'they would not be in a position to undertake their responsibility in accordance with the expectations of the Supreme Court directives' and therefore wished to be relieved of their task.

The two non-official members, however, decided they were competent to proceed with the directions. In September, the two submitted their report to the Court.

The report – which was painstakingly and elaborately researched – urged the Court to set up a 'National Medical and Rehabilitation Commission' and to draw up an imaginative and scientifically planned medical rehabilitation scheme for the victims as was recommended by the ICMR in June 1986. It suggested a well conducted epidemiological study to gain a reliable assessment of the extent and depth of the public health problem, without which scientific management is not possible. Such a study would also be a judicial basis for assessment of the quantum of compensation.

There is no information available anywhere on the fate of the report.

The most significant media event of the year was the manner in which the media in Bhopal was set up by Union Carbide's lobby to scandalize the perfectly bonafide activities of a TV team from Granada television.

The team's earlier documentary film on the gas disaster, *The Betrayal of Bhopal*, released in June 1985, which had won international acclaim, had been able to establish that it was Union Carbide's cost-cutting methods, safety double standards and design defects that had led to the disaster. Its current investigations were to nail Carbide's 'sabotage' theory and to record the long-term effects of MIC on human beings.

The media was put up to report that the TV team had bribed a group of social activists to stage-manage a rally and other events for it to get good 'live footage' and also to claim that the TV team did not have the government's permission to work in Bhopal and was doing its work surreptitiously.

As it turned out, the entire story turned out to be concocted. The six-member team had come to India with the full permission of the government and, in fact, two officials (of the External Affairs Ministry and the Petrochemicals Ministry) even accompanied the team to Bhopal.

Surprisingly, on the fourth anniversary of the Bhopal disaster, the 1 km road outside the Union Carbide plant wore an almost festive look. Sweetmeat and savory venders lined the road and tea and

samosa stalls did good business. Political parties and social groups set up *pandals* along the route and each tried to drown the other by raising the volume of their speakers.

The government had declared a local holiday, but the city also observed a bandh with all commercial establishments closed. The usual effigies of Warren Anderson were burned. Five hundred CPI cadres who tried to invade the plant were arrested. The BJP had organized an all-night *Shloka Path* and the MP Vigyan Sabha staged a number of street plays. A state government statement issued to the press on the same day claimed that Rs.26 crore had been provided for social rehabilitation, but gave no indication as to where the money would come from.

In a speech broadcast over All India Radio (recorded in America where he was with his wife), Chief Minister Arjun Singh – whose private charity organization had received a considerable sum of money from Union Carbide before the disaster – condemned 'the cruel international company and its ruthless management which had caused untold agonies to lakhs of people' during the last four years.

THE FIFTH YEAR AFTER (1988–1989): An Unsettling Settlement

Hardly were the fourth anniversary commemoration meetings over, than the MP government was back to its old bureaucratic mindlessness. The state-level Committee on Gas Relief and Rehabilitation met on 24 December to sanction Rs.4.50 crore for road works and development of open spaces to be taken from the Gas Victim Relief and Rehabilitation budget for that year. The chairman of the committee also wanted to raise a compound wall for the Maharani Laxmibai College out of the same fund! There was hardly any discussion about the medical facilities to be extended to the victims.

In the Supreme Court, in the meanwhile, the cross appeals filed by Union Carbide and the GoI against the MP High Court judgment granting Rs.250 crore as interim compensation were being heard. On the very first day, Chief Justice R.S. Pathak set the tone by observing 'the case should be settled.' Several talks between the two sides took place thereafter, but without the knowledge of the public or the gas victims, though apparently with the Court's knowledge.

The country and the world were therefore stunned when suddenly, on 14 February 1989, the Supreme Court directed Union Carbide to pay up US$470 million in 'full and final settlement of all claims, rights and liabilities arising out of the disaster in 1984.' The Court also ruled: 'To enable the effectuation of the settlement, we direct that all civil proceedings shall stand transferred to this Court and stand concluded in terms of the settlement and all criminal proceedings shall be quashed wherever they are pending.' (The legal effects of these judicial developments is commented on in detail in the accompanying piece in this book written by Supreme Court lawyer, Ms Indira Jaising).

Union Carbide was the first to describe the Court's decision as 'fair and reasonable' and the company's stock soared on the London market immediately after. But the country as a whole, particularly the victim groups, reacted in a rage and with bitterness. The settlement was attacked at public meetings, one of them presided over by no less a person than former Supreme Court Chief Justice P.N. Bhagwati.

In a dramatic action, a group of social workers descended on the Supreme Court with brooms and rigorously swept the main stairs clean of the taint of the Union Carbide settlement. Gas victims invaded Union Carbide's office in New Delhi, painted the walls with slogans and broke window panes, furniture and equipment. In Mumbai, about 70 activists of the Bhopal Action Committee burnt the US flag in front of the American Center at New Marine Lines to register their protest against the settlement.

Besides victim groups in Bhopal, among the organizations which participated in the demonstrations were the Indian Federation of Trade Unions, the Vidyarthi Pragathi Sanghatana, Navjavan Bharat Sabha and the Committee for the Protection of Democratic Rights. A large number of teachers from Jawaharlal Nehru University (JNU) including more than 60 professors supported a joint call by teachers associations, student organizations and trade unions in Delhi to protest against the settlement.

As was to be expected, within a month, several review petitions against the settlement order were filed in the Supreme Court. Petitioners included the BGPMUS and even consumer groups like the Consumer Education and Research Center, Ahmedabad.

The mass agitation had its impact soon enough: the second-ranking judge of the court, E.S. Venkatramaiah, upset by the criticism, announced in open court that he wished to withdraw not only from the five-man Constitution bench but also to disassociate himself from the 14–15 February judgment. Complained the judge: 'You open any newspaper and we are being impeached.'

Faced with the widespread protest, the Supreme Court admitted the review petitions, opened the question of the constitutionality of the Bhopal Act and stayed its own order of 14–15 February 1989 and the settlement.

A new bench headed by Justice Sabyasachi Mukherji was constituted to first hear challenges to the Bhopal Act.

The protests against the settlement and its subsequent stay by the Supreme Court only meant one thing: that compensation to the victims would be delayed even further. The issue of interim relief therefore came up once again in the Supreme Court during the hearings challenging the validity of the Bhopal Act.

On 21 April, the Supreme Court finally directed the state of MP to pay Rs.750 per month as interim relief to the heirs of each adult diseased gas victim 'till further orders.' The payments would start from 7 May. The Court also asked the Central and MP governments to furnish, by 28 April, necessary particulars in respect of other categories of gas victims who may also be in dire need of interim relief.

A second order on interim relief was decreed by the Court on 25 August when it directed that a lump sum of Rs.1000 be paid to each of 7,687 victims categorized as having permanent injuries. The Court also directed that the categorization and medical evaluation of 3.41 lakh people be completed within four months (so far 1.49 lakh claims had been processed).

Even while these proceedings were going on, hundreds of gas disaster victims continued to stage demonstrations outside the court walls vociferously demanding a review of the 14–15 February settlement.

It is not known why the government of India and the Supreme Court decided so hastily to reach the controversial settlement. At the time the settlement was ordered, the processing of claims was still in a mess and nowhere near completed. In May, however, the Court passed another order in which it set out the reasons why it had ap-

proved the settlement of 14–15 February. The main part of the order dealt with the number and categories of probable gas victims which had been placed by the MP government before the Court and attempted to justify the settlement on those grounds.

It was estimated from these records that approximately 3,000 people had died; that there were about 30,000 cases of permanent total or partial disability; 20,000 cases of temporary total or partial disability, and 2,000 additional cases of the 'utmost severity.'

But, victims' groups asked, what was the factual basis for this categorization? Was it based on any epidemiological surveys? At the time of passing of the settlement order, a good deal of the necessary medical examinations had not even been conducted on the victims. The State Government had engaged doctors on a temporary basis on payment of Rs. 100 per day and each doctor had been asked to fill at least 20–25 assessment forms per day, which did not give them time to test each patient adequately.

But was the government even prepared with the logistics of getting the compensation money to the victims of the disaster? The Bhopal Act had set out the modalities of overseeing the welfare of the victims and the procedure for deciding claims. P.D. Mulye, a former judge of the M.P. High Court, had been appointed Claims Commissioner under the Act in 1986. In 1989, he was still telling *India Today*: 'We have no infrastructure to start our work.' For some reason, the government just refused to make the requisite facilities available.

In fact, it was already clear to the government much in advance that the Commissioner would require more than 50 judicial magistrates to act as Claims Commissioners in the different wards and seven district judges to hear appeals. Since none of the infrastructure was set up or any appointments made, Justice Mulye was unable to issue any notification inviting claims from the victims.

A more curious development was in store. In August, the MP government approved an affidavit (signed by the Additional Director of Claims) which it filed in the petition demanding interim relief, and which gave a completely different and distorted picture of the impact of the gas on Bhopal citizens' lives. The affidavit said that the examination of 3,41,000 medical folders of gas victims had been completed and the Director had been able to categorize 1,23,560 of them. He then set out the following categories of victims:

(i)	No injury:	51,584
(ii)	Temporary injury:	64,064
(iii)	Permanent injury:	5,192
(iv)	Temporary disablement caused by temporary injury:	1,629
(v)	Temporary disablement caused by permanent injury:	310
(vi)	Permanent partial disablement:	762
(vii)	Permanent total disablement:	19

It was fairly obvious that, according to this data, more than 90% of the victims were categorized as not injured or temporarily injured/cured; 5% were supposed to have minor injuries and less than 1.5% were totally and permanently disabled!

Shocked by these figures, a team of three medical experts, with technical help from the Center for Community Health and Social Medicine, JNU, carried out a fresh survey of the health of the gas victims from 15–22 October with the help of 43 volunteers. The preliminary report of the team was titled *Against All Odds: Continuing effects of the toxic gases on the health status of the surviving population in Bhopal five years after the disaster.*

The carefully drafted report made an elaborate critique of the Personal Injury Evaluation carried out by the government. It set out the results of its own recent sample survey which brought out clearly the continuing severity of the situation. It reported that gas-induced illnesses had caused a reduction in the ability of people to work. The main features of the study were as follows:

- 70 to 80% of the gas-affected population in the seriously affected area and 40 to 50% in the mildly affected area suffered from a medically diagnosed illness even five years after the gas leak.

- Of the 70% reporting breathlessness due to respiratory illness in the seriously affected area, 55.6% were likely to have allergic alveolitis or chronic obstructive lung disease with or without a history of repeated infections.

- Of the 26% reporting upper gastrointestinal symptoms, 42% possibly suffered from atrophic gastritis (a pre-malignant condition), 24% from esophagitis, 33% from either of these two or duodenal ulcer.

• 71% of the individuals from the severely affected area and 35% from the mildly affected area were diagnosed to have eye disease. There was a significant increase in the prevalence of cataract at a younger age in the gas-affected area.

• 66% from the seriously affected area and 33% from the mildly affected area reported neuro-musculoskeletal symptoms.

• 13% of the individuals from the seriously affected area reported a loss of libido.

• 64.7% of women from the seriously affected and 47.6% from the mildly affected area reported disturbances in the menstrual cycle such as dysmenorrhea, irregularity in cycles, excessive vaginal discharge, menorrhagia and polymenorrhoea.

• Post-traumatic stress disorder – a gas-related problem of mental health and a compensable injury – was confirmed in 57% of the 70 individuals examined by qualified psychiatrists.

The survey also revealed other aspects: it showed, for example, that 61% of the affected population had not filed claims simply because they were not aware that each member of the family was entitled to a separate claim. As a result people in the 5 to 23 year age group did not file claims.

Of those who did file claims, as many as 40% did not go for medical examination due to ill health or for fear of losing a day's wages. The Directorate of Claims maintained it sent three notices to the 6,00,000 victims but the MFC found that as many as 53% had not received even a single notice. Very few of those who reported symptoms could produce proof of treatment or hospital records. Thus, the MFC survey completely undermined the basis of the MP government's affidavit.

Faced with such intransigence from the authorities in Bhopal and Delhi and in a major effort at representing the plight of the gas-affected victims to the rest of the planet, three gas victims, Chander Singh Nimgule, Sunil Kumar Rajput and Bilkes Bano, accompanied by two activists, Satinath Sarangi and Dr C Satyamala left on a seven week tour of the US and Europe in April. Wherever they went, the group demanded the overthrow of the proposed settlement, the accountability of the responsible parties and the pressing need for provision of relief and justice to the victims.

The tour served to underscore the failures of current legal and political systems to deal with the needs of victims of industrial disasters in industrialized and developing countries alike. Besides several stops in US cities, the team also spent time in Ireland, in the Netherlands and in the UK meeting members of communities located in the neighborhood of hazardous facilities.

Two extremely poignant deaths of gas victims made the news. On 24 March, Kailash Pawar, a 25 year-old gas victim whose lungs were badly damaged by the gas, immolated himself inside the Jawaharlal Nehru Gas Relief Hospital. For a long time, he had been living only on oxygen. Pawar who made a living selling food, was frustrated because of continuous ill-treatment by doctors and general government apathy. He was finding it difficult to feed his wife and two children. He never received any compensation.

On 5 July, a prominent soldier, Brigadier M.K. Mayne, also died of complications consequent on exposure to the lethal gas.

On the fatal morning of 3 December 1984, the brigadier, then posted as Sub Area Commander of the Bhopal Area, had moved every army vehicle under his command to shift out hundreds of gas-affected victims who were near death from the narrow streets of the walled city. Awarded the *Ati Vishist Seva* medal for his indomitable courage, the brave soldier never recovered from the exposure to the lethal gas and had to be periodically hospitalized over the last five years till his death.

On 3 December, the fifth anniversary of the disaster, 300 persons were arrested when they tried to grate crash into the Union Carbide Plant in Bhopal. Several meetings were held to commemorate the disaster – one by the *Morcha*, another by the BJP, a third by the CPI. The BGPMUS held its public meeting in the center of the city.

The Chief Minister flew back into town from Delhi to offer prayers at an all-religion prayer meeting. Even the National Students Union of India, affiliated to the Congress, led a demonstration to the plant and burnt an effigy of Warren Anderson.

But the truth was better illustrated by Anil Sharma when he compared the different ways in which victims of two major disasters (one of them, Bhopal) had been treated that year. In an article in *The Times of India*, Sharma estimated that approximately US$40,000 were spent on the rehabilitation of every sea-otter affected by the Alaska oil spill

(caused by the *Valdez* oil tanker). Each sea-otter was given rations of lobsters costing US$500 per day. In addition, *Exxon Valdez* itself spent US$1.28 billion on the cleanup – in addition to anticipated expenses on 154 law suits that were still in litigation.

The Bhopal gas disaster, which left 3,500 dead and over 6,00,000 injured, was settled for a mere US$470 million which works out to around Rs.10,000 per victim if it had been divided equally amongst all. It was already apparent thus, by the fifth anniversary, that the life of an Indian citizen in Bhopal was clearly much cheaper than that of a sea otter in America.

THE SIXTH YEAR AFTER (1989–1990): The Joy of Interim Relief

The country went to the polls to elect a new government in November 1989. Little did the gas victims imagine that the elections would produce a stunningly different scenario within the portals of the Supreme Court.

When the 14–15 February 1989 settlement had been announced, opposition politicians, particularly from the Jan Morcha and Janata Dal, mounted an attack in Parliament, calling it 'a betrayal, a sellout and abject surrender.' The new government of the National Front, formed of these very groups, decided shortly thereafter to distance itself from the settlement. Prime minister, V.P. Singh bluntly declared: 'No one has the right to bargain over the corpses of people.'

Accordingly, the Union Minister for Law and Justice announced in January, that the government had decided to back the review petitions filed by victim groups and also to file an affidavit demanding a review of the settlement on the grounds that it was unfair. 'We believe,' said the minister, 'that the settlement of US$470 million was totally inadequate. After all, human life in this country cannot be so cheap that the world's worst industrial disaster, which is second only to the man-made disaster of Nagasaki and Hiroshima, can be compensated for by money.'

In an article in the *Times of India* (14 Jan.), legal scholar Upendra Baxi lauded the law minister's announcement as marking 'the revival of the rule of law not only for the victims, but also for the country's future.'

But, on 22 December 1989, the Supreme Court upheld the validity of the Bhopal Gas Disaster (Processing of Claims) Act, 1985. The

Act had given the Central Government exclusive right to sue Union Carbide or pursue other legal forms to ensure that justice was done to the victims. The judges said they did not find anything wrong with the Act, but went on to identify certain infirmities that had arisen due to its implementation which were reflected in the settlement order.

As for the review petitions, just as the judges had completed the hearing of the entire lot, and reserved orders, the Chief Justice died of a heart attack. This entailed, following court procedures, the necessity of the petitions being heard all over again. The Court therefore directed the case be heard afresh from November. (The final order would only be delivered in October 1991).

In addition to its unconventional decision to back the review petitions, the National Front government also announced another epochal measure. In January, it sanctioned Rs.360 crore for a 'one-time' interim relief payment to over 5 lakh people in 36 wards severely affected by the disaster. Two months later, this decision was modified: the interim relief would be paid at the rate of Rs.200 per month, per person, for a period of three years. The decision was taken by the Union Cabinet following the recommendation of a group of ministers which felt that final compensation may take considerable time, that victims had suffered for five long years and could not be asked to wait any longer.

On 13 March, the Supreme Court put its seal of approval on the interim relief proposal when petitions filed in 1988 by BGMPUS and others seeking similar interim relief came up for hearing. The Court directed that all persons identified as victims be given a monthly subsistence of Rs.200 for three years. This was to be granted to about 6,00,000 victims in 36 gas-affected wards of Bhopal. Those permanently disabled would be given Rs.500 per month as subsistence for a similar period. The court also directed that interim relief required by its earlier orders in 1989 would continue.

Though these directions on interim relief had been issued from the apex court itself, the government of MP took its own sweet time to organize the process of distributing the relief payments to the victims. Its officials claimed they would require seven to eight months to carry out preliminary identification work. In addition, banks in Bhopal were virtually up in arms pleading lack of infrastructure to undertake the gigantic operation: the project involved more than 500,000 new accounts and the disbursal of Rs.10 crore every month.

Since entitlement for interim relief was based on actual residence in any of the 36 wards and since there were no official records of the residents of these wards, the bureaucracy, as usual, proposed to verify the claim of residence of each and every person in the area. For this purpose, 36 beneficiary identification centers (BICs) were set up where notice would be issued to victims on the basis of three documents: first, the computer list of claimants; second, the Tata Institute of Social Sciences (TISS) survey; and third, the electoral lists. The victims were asked to bring the notice, their claim reference card, the TISS survey form, their ration card and three copies of their photographs for which the administration paid.

If all the documents were complete, the victim was then sent to the Assistant Beneficiary Identification Officer (BIO) who once again verified all the documents and handed over a stamped receipt. After this, the victim proceeded to a banking officer, got the account opened, then returned to the BIO. Only after this would the payments begin to be made. Money for children was deposited with the mother. The government would deposit the money in the account every month. The entire sum deposited had to be drawn out in cash (obviously, since it was meant to be used as a subsistence allowance).

The cash disbursal centers were not organized to suit the victims and different family members had to go to different disbursal centers in various parts of the city to collect their money.

Wrote Anjali Deshpande, a journalist covering the disbursal of relief: 'Although the plan of action repeatedly prefaces all objectionable provisions with "keeping the beneficiaries' interests in mind," it is actually worked out with the interests of the bureaucracy in view. It is the affected who are expected to do the working and waiting, while officials sit behind desks. Such attitudes betray little understanding of the physical and psychological damage that the hapless victims of the world's biggest industrial disaster have had to suffer.'

Much annoyed by all this, 2000 victims, under the banner of the BGPMUS, travelled to Delhi and staged a day long *dharna* outside the Prime Minister's house in June. In a memorandum to the Prime Minister, the BGPMUS complained that the list of victims had not been made public, names and addresses had been wrongly spelt and that several people were nowhere on the list. The BICs had been so located that gas victims had to travel up to 40 km and even more to get relief. Officers were demanding bribes.

Since the state government had chosen to keep out all voluntary organizations, there were no possibilities of feedback and therefore no avenues for improvement in the distribution system.

Nevertheless, by December 1990, 3,03,707 gas victims had started receiving a monthly payment in all the 36 wards.

During my visits to the various colonies in 1991, I discovered that, six years after the disaster, a large number of people were finally receiving the money. Almost all found it useful since it enabled them to purchase monthly rations. There seemed to be relief, joy, and a certain renewed confidence, particularly among the women, many of whom now headed families, the male members having been killed in the disaster.

Activists working with gas victims over the years also testified to the impact that the interim relief was having on people's lives. Wrote Dr Rajeev Lochan Sharma and Satinath Sarangi: 'Provision of such relief has made a difference in the lives of the victims; they are eating better, are not forced to do hard work and are slowly paying back the debts they had incurred in the last few years.'

In the meanwhile, the MP government reported more progress on the categorization of gas victims. In April, the MP counsel in the Supreme Court submitted updated figures of gas victims in the various categories. The new submission was even more shocking than the one made earlier. According to the government, the latest position appeared to be:

— Total claims filed as on March 31, 1990:	6,39,793
— Medically examined:	3,59,373
— Evaluated as well as categorized:	3,57,485
— No injury:	1,54,813
— Temporary injury:	1,72,776
— Permanent injury:	18,963
— Temporary disablement caused by temporary injury:	6,823
— Temporary disablement caused by permanent injury:	1,137
— Permanent partial disablement:	2,534
— Permanent total disablement:	40

In other words, the authorities were still claiming that 90% of the gas victims were, as on that date, normal, healthy human beings.

The categorization results were, naturally, greeted with howls and curses. They effectively undermined the review petitions and even rendered ridiculous the estimates on which the Court itself had passed the settlement order of 14–15 February.

Over 1,25,000 people lived within a three kilometer radius of the factory. A dose of 0.02 ppm of MIC is lethal to human beings. Yet, the MP government was now claiming that not more than 40 people were irreversibly disabled and that nearly 1,55,000 victims had sustained no injury at all despite having inhaled the deadly gas. What a miracle indeed! How did the MP government determine the 'no injury' category?

It is the guidelines issued to the doctors carrying out the tests for the categorization that provided the clue: the doctors were asked to give individual numerical scores to different aspects of each gas victim's health status. The scores for the immediate post-exposure health status (1984–85) were to be given purely on the basis of medical records available with the victims.

This was quite a tall order: first of all, many people could not reach a hospital or health center on the night of the disaster due to overcrowding, chaos and inadequate facilities. Others had lost their records; many had torn up their records in a rage. All such persons were given a score of zero in their immediate post-exposure health status and categorized as 'no injury' cases!

If the score of the victim's current (1987, when the medical investigation was carried out) health status was the same as that of her/his immediate post-exposure status in 1984–85, s/he was categorized as 'temporarily injured'. This meant that three years after the disaster, if a gas victim still showed the same symptoms, s/he would be defined as 'temporarily' injured!

Another alarming revelation from the figures was that 2,80,420 claimants had *not yet been medically examined at all.*

Further, another 1,00,000 gas-affected people were yet to file claims for damages since they were below 18 years of age when the disaster struck, and government functionaries had clearly stated that minors were not entitled to compensation.

Faced with a rebellion from victims, looks of consternation from the Court and global scorn, the MP administration immediately conceded that the categorization exercise was flawed and decided to do

a revision of the numbers of victims in the various categories. To achieve this, officials now carried out a random check of about 10% of the completed records, and upgraded 500 cases in that number. The upgrading was done on the basis of 'additional' documents furnished by the claimants or retrieved by the directorate as well as a revaluation of injuries of the victims themselves. If the result of this exercise was extrapolated to the rest of the victims, the court was informed, it would eventually influence the status of only an additional 5,000 cases.

As if to mock this effort at reducing the intensity of suffering among the victims and also their number, the ICMR released the official 1990 Annual Report of its Bhopal Gas Disaster Research Center (BGDRC). The report made serious new disclosures about the health condition of the gas victims.

In April 1986, after a year of preliminary investigations, the ICMR had proposed four crucial areas for investigation: (1) how long would the effects [of the gas] last; (2) what permanent disabilities could be expected; (3) what was the outlook for the victims; and (4) what of their offspring? The answers to all four questions were even more alarming in 1990 than they seemed earlier. Detailed epidemiological data showed that, in the 36 wards affected by the leaked gases, the morbidity rate had shot up from 15.3% in 1987 to 30.5% in 1990. The toxicity of MIC had assumed a systemic character and even the simple injury cases were by no means simple any longer.

The study also suggested that:

—Adverse and persistent health effects were to be found on a large scale among all groups of people exposed to toxic MIC and other gases.

—There was no threshold below which exposure did not cause health damage i.e. all exposure, howsoever mild, was liable to cause harm.

—Typically, there was no such thing as a simple injury. Usually, there were multiple and complex injuries. A victim who suffered from say, corneal damage was also likely to exhibit symptoms of pulmonary (lung), neurological, psychiatric or other disorders.

—There was no consistent pattern of improvement or gradual restoration of normalcy among the victims. Indeed, there was deterioration among a sizable section of the affected people, as well as a

rising curve of general ill-health within the population of 36 wards in Bhopal.

The continuing deaths were mainly due to respiratory causes. Even at the end of more than five years, a large percentage – over 62% – of randomly selected persons from the gas-exposed areas was found to be symptomatic for severe to moderate lung afflictions.

According to the survey, eyes of victims were grossly affected. The number of eye infections in general was found to have trebled over the last three years: the disorders included corneal opacity (a high 15% in the sampled group), chronic conjunctivitis, conjunctival xerosis and trachoma. All these disorders were found to persist with little or no improvement over time.

Psychiatric disorders were found to be of the order of 48 per 1000 of the gas-affected population compared to 14.84 in control areas. Further, the number of female patients with these disorders was found to be much higher than that of the males.

The investigations on women revealed a high rate of involuntary abortions (7.5%) even after five years, though this was significantly lower than the rate (24%) among women who were exposed to the gas during their pregnancy. Stillbirths, pre-natal, neonatal and infant mortality rates continued to be high in the affected population.

Studies on the growth and development of children born of mothers exposed to MIC during pregnancy showed that the majority of children exhibited a delay in gross motor and language aspects of development. Children exposed to the gas as infants displayed a high respiratory morbidity rate.

Cytogenetic effects were also noticed among the exposed population in the form of high chromosomal aberrations and sister chromatid exchanges. MIC's toxicity also extended to the immune system where it was found to alter the population of T4 and T8 cells in the white blood corpuscles, thus affecting the cell-mediated immune response of the body.

The ICMR study was indirectly confirmed by other data available with the State Government which showed that hospitals treated the maximum number of patients in 1989, indicating a progressive worsening of victims' conditions. The rush to the hospitals was explained as being due to the fact that the immune systems of the victims had been damaged and lack of resistance had rendered them vulnerable to all sorts of diseases and frequent viral infections.

The general elections referred to earlier had another major effect in the state of MP, where they threw up a BJP-led government. A tug-of-war, over financial allocations, with the National Front Government at the center was bound to arise, further complicating matters. The MP minister for gas victims and finance was soon heard complaining that unless funds were made available by Delhi speedily, the government would have no option but to close down hospitals and dispensaries catering to the gas-affected. The State Government said it had no funds even to dispense the salaries to the hospital staff and that the Bhopal gas tragedy department was finding it difficult to carry on day-to-day work. Welfare programs included the running of nearly 100 creches and extending loans to affected people to start small businesses.

So, it was not surprising that on 3 December 1990, it seemed as if people were just going through the motions of observing the sixth anniversary of the disaster. The Chief Minister, his cabinet and party colleagues offered prayers at various mosques, temples, churches and gurudwaras, visited the cemetery and burial grounds, distributed fruit to gas victims and toys to children.

But the same evening the CM was also attending an entertainment program in Indore, something which had never been done by any of his predecessors on any of the disaster's five earlier anniversaries.

The state of MP, it appears, was already tiring of the burdens of the disaster.

THE SEVENTH YEAR AFTER (1990–1991): An Unjust Settlement Is Upheld

The year 1991 saw renewed and recharged organized effort on the part of the gas victims' lobby groups to restore the urgency of Bhopal on the national agenda. The state of medical relief, compensation and rehabilitation was still in a fairly scandalous state, and, for the first time since the disaster, no allocation had been set aside in the state budget for treatment or rehabilitation of the victims. There were disturbing signs everywhere that those outside Bhopal wanted to forget the disaster and get on with their business.

In April, several NGOs (most notably, the BGPMUS, the BGIA and the BGPSSS) organized a national convention on the Bhopal gas leak disaster and its aftermath. The meeting was attended by over 40

mass organizations from various parts of the country. During the two-day deliberations, the participants focussed attention on the Bhopal settlement, on the need to set up a National Commission to oversee all aspects relating to the disaster and the need for proper legislation to protect the community from hazardous industries. The convention also called for a 'National Action Plan' to mobilize public support on these issues.

Early in the year, preparations were made to transport some gas victims to the US to testify before the International People's Tribunal on Industrial Hazards and Human Rights. The move received a setback when the US government rejected the visa applications of four gas victims who had been invited to testify by the tribunal. Apparently, the visas were denied on the grounds that the victims had 'no compelling reasons for returning to India.' The victims were also barred from applying again for another two years.

Eventually, the tribunal heard Satinath Sarangi from the BGIA and T.R. Chouhan. Upendra Baxi, Vice-Chancellor of Delhi University, served the tribunal as *amicus curiae.*

After hearing testimony from victims of industrial disasters worldwide, the tribunal eventually decided there was clear and unambiguous evidence of gross violations of human rights by corporations and government agencies.

Victims' groups were also active on the home front where they maintained pressure through *dharnas* and agitations. About 700 victims marched from Nizamuddin railway station to the Supreme Court building in Delhi. There they erected a temporary shelter for themselves, facing the building. Later, additional members of the BGPMUS joined the sit-in. The *dharna* continued for ten days with another 700 gas victims reaching Delhi by 29 July. The reason for the *dharna* was the impending verdict of the Supreme Court on the review petitions challenging the 1989 settlement.

The victims were naturally apprehensive their interests might be betrayed once again, since the Congress (I) government, which had approved the settlement, was back in the saddle in New Delhi.

Efforts were also made to broaden the struggle to ensure that Bhopal-type disasters were prevented elsewhere. This had become imperative in the light of the new economic policies being rapidly imposed by Delhi which provided incentives to transnational corporate giants to set up units without establishing adequate norms for

the production and storage of hazardous substances. Members of Parliament were lobbied thereafter. A hundred and forty parliamentarians signed a collective appeal to the GoI to:

1. Re-affirm its commitment to establishing the corporate and continuing liability of Union Carbide for the Bhopal catastrophe, both through proper compensation, medical care and rehabilitation of the victims and through criminal prosecution;

2. Set up a National Commission on Bhopal;

3. Immediately convene a medical committee to put together all data on the nature and extent of injury, its evaluation, and evolve guidelines for proper treatment and rehabilitation of the victims;

4. Lay down adequate standards for protection from industrial hazards in this country; and

5. Push for the speedy establishment and implementation of an international code of conduct for transnational corporations.

'Bhopal,' concluded the parliamentarians, 'is a lesson that none of us can afford to forget.'

In July, another delegation of victims met the Prime Minister and also the Human Resources Development Minister and pressed for the setting up of a National Commission on Bhopal, a long-standing demand. Despite all this, the government informed Parliament the following week that it saw no need to set up any Commission.

Through the entire months of August and September, the victims kept visiting Delhi, filing additional petitions and expecting, any day, the judgment on the review petitions.

Finally, on 3 October, the Supreme Court unanimously upheld the US$470 million settlement, but in its 198-page verdict set aside the part of the settlement that had granted immunity to the officers of Union Carbide and UCIL from all present and future criminal liabilities arising out of the gas leak.

The Court also issued several directions on properly administering the Rs.1,200 crore Settlement Fund and directed the central government to make good the deficiency, if the fund were found insufficient by the Relief Commissioner.

The Court also asked Union Carbide and UCIL to allocate Rs.50 crore to set up a 500-bed hospital with advanced medical facilities in Bhopal within 18 months for the victims of the tragedy. Treatment

and medical surveillance at the hospital would also be financed by Union Carbide for a period of eight years.

The Court also directed the government to formulate an appropriate medical group insurance cover to compensate those who might seem to be well, but might begin to display symptoms of MIC poisoning in the future. The premia would be paid from the Settlement Fund.

Union Carbide reacted sharply to the judgment in New York, describing the Court's decision to reopen the criminal cases 'as unfortunate,' but added: 'Presumably, the Indian Government will now deal with the issue of employee sabotage. We believe that a fair hearing on this issue will establish the true cause of the disaster.'

The judgment brought both relief and disappointment throughout the country: relief that the criminals responsible for the mass slaughter of people might be brought to book after all; disappointment because the financial settlement had been left unchanged.

In his reaction to the judgment, Prof. Upendra Baxi said the Supreme Court had hurt the interests of the Bhopal victims by giving up its jurisdiction over Union Carbide. Prof. Baxi noted that the Court itself had acknowledged in its judgment the need to keep victims under medical surveillance for eight years. On the other hand, it had released Union Carbide altogether from the liability of the damages that may be proven against them in future. The judgment was condemned by the BGIA, the BGPSSS and the BGPMUS.

Reacting to the 3 October, Praful Bidwai concluded 'the apex-level judiciary had reached a point of exhaustion, run out of judicial activism and stamina, failed to rise to the exceptional legal challenge posed by a mass-level toxic case and effectively turned its burden on to the Executive.'

Later the same month, the Court dismissed all pending petitions relating to the compensation amount or disposed off others stating that the reliefs sought in these petitions would be granted in terms of its 3 October order. The Court also set up a two-judge Bench for dealing with any future petitions on the gas tragedy.

Thus, almost overnight as it were, the battle for compensation and damages was already over even before it had begun. The criminal case was resumed. The CBI told the Press Trust of India that it

had decided to reopen requests for inspecting the Union Carbide plant in West Virginia.

On his part, the Chief Judicial Magistrate of Bhopal issued a proclamation asking Warren Anderson to appear in his Court by 1 February 1992.

The question now uppermost in people's minds was whether the victims would now receive their dues in terms of compensation.

Early in 1991, the central government had formally approved a Rs.160 crore action plan for the relief and rehabilitation of the gas victims of Bhopal. Though it had been pending for more than two years, it was approved only after the state government had assured the center it would not raise its demand for declaring all the 56 wards of the city as gas affected. The state government was keen to declare the entire city of Bhopal gas-affected (for its party's own political ends) even while it continued to brazenly file affidavits claiming the gas had not really affected too many persons permanently or seriously!

Then, like a bolt out of the blue, the government directed the ICMR to stop all its research projects on the health impacts of the gas disaster just as the experts were reaching some consensus on a line of treatment for the victims. The staff employed in the BGDRC promptly went to court.

But the message was become increasingly clear. The future health status of the victims would no longer be a responsibility of the government: they would have to look after themselves using the compensation they received, for the purpose.

The BJP Government in Bhopal, meanwhile, spent more than Rs.13 crore of the relief money it had received from the center to demolish the houses of gas victims, and to relocate them 13 km out of town, where they had neither housing, transport or water facilities. 'The center provides money but does not see what the state government does with it,' Abdul Jabbar Khan complained, 'while the victims are kicked around by government like footballs.'

Problems also arose on another front when a serious shortage of medicines developed in the three hospitals and fourteen dispensaries where treatment for victims was free.

The NGOs, however, gamely carried on with their tasks of monitoring the health of the victims and continuing to propose strategies for alleviating their illnesses.

In November, the BGIA carried out a survey in three gas affected wards of Bhopal with a view to produce a state-of-the-art picture of the victims and the problems they faced with the disbursement of compensation.

The survey listed several problems that still existed in the identification of gas victims. For instance, children born after the disaster continued to be excluded from the list, even though many of them were bound to display symptoms of poisoning later. The most important finding was that, on an average, 42% of the residents in the three wards had not yet registered claims. If one left out the post-disaster children from the figures, the average was still 21%. Given that ration cards had been considered as one of the important proofs of residence and of being a victim, it was found that 20% of the people in the area did not have ration cards. Nearly 34% were still not receiving the monthly interim relief of Rs.200 ordered by the Supreme Court. These findings concurred with those of the survey carried out by the Medico Friends Circle (MFC) in October, 1989.

The BGIA also found that medical examination of the gas victims was incomplete. Essential tests had not been carried out on the majority of those who had been medically examined. A large majority of the examined victims had not been informed of the category in which they were placed. The survey also found that the medical categorization of the claimants by the Directorate of Claims grossly underestimated the injuries.

In its conclusions, the BGIA emphasized that gross injustice would be done if each individual claimant was now compelled to argue his claim before the Claims Court. It recommended, therefore, an alternative scheme by which a final sum would be paid to all residents of the 36 wards after conducting an effective screening exercise. The scheme would obviate the necessity of each of the over 500,000 victims having to present himself/herself at great expense before the courts. Those dissatisfied and who felt they had the right to get more, would then have the freedom to pursue the matter in the Claims Court. (A similar demand was also being made by the BGPMUS).

As a result of its survey, the BGIA decided, in principle, to initiate a cooperative health care clinic which would popularize therapies based on rational drugs, involve victims in the diagnoses and treatment of other gas victims and continue to monitor the health status of the gas victims.

On 3 December, the entire city once again was out on the streets as one morcha after another wound itself through the narrow lanes and by-lanes of Bhopal, all finally converging at J.P. Nagar, opposite the Union Carbide plant. People stopped at graveyards and crematoria to pay homage to the dead and, outside the factory gates, once again effigies of Anderson were burnt to cinders.

The commemoration was not restricted to Bhopal. Even in faraway Norway, members of three organizations staged what they called a 'Night Awake' in front of the Indian Embassy in Oslo – while the mercury was hovering around –6 °Celsius.

THE EIGHTH YEAR AFTER (1991–1992): The Victims Are Cheated Again

On 19 December 1991, the Ministry of External Affairs said that it was examining a CBI request to publish a proclamation in *The New York Times* and *The Washington Post* against Warren Anderson.

But by April, *The Economic Times* was already reporting that the Indian Government was hesitating to press for the extradition. Apparently, the request had been debated at the level of the Prime Minister himself. The apprehension was that if the government followed the Bhopal court's orders, this could frighten off prospective multinational investments already underway in the country in the wake of the government's new economic policies. There was also the fear that the US might retaliate and carry out action against India under its 'Special 301' provisions.

Union Carbide, in the meanwhile, was lobbying hard with the US Trade Department to persuade India to drop the case: officials of the corporation contended that nothing would be achieved by extraditing 'an aged retired chairman' and he should be spared harassment on humanitarian grounds.

On 15 April, Union Carbide chairman, Robert D. Kennedy announced that the corporation would sell its holdings in India to raise the approximately US$17 million required for the hospital in Bhopal which it had been directed to set up by the Supreme Court order of 3 October. Mr. Kennedy said Carbide would sell its 50.9% stake in UCIL to raise the money. He also stated that a trust fund for the hospital had already been established on 20 March in London.

There was spontaneous denunciation of the Union Carbide chairman's proposal the very next day in Bhopal. The BGIA and the

BGPSSS warned the government of direct action if it failed to ensure that the corporation's assets were not liquidated before the law of the land could take its course. 'Given that the corporation is liable to pay fines for its criminal acts,' the groups said, 'the government should take steps to see that at least US$3 billion worth of unencumbered assets are maintained by the Union Carbide during the pendency of the criminal suit.'

On 11 November, arguments for framing of criminal charges against Union Carbide and UCIL commenced in the court of Additional District judge, Wajahat Ali Shah. Counsel for the CBI charged Carbide with criminal negligence. He also said that since Union Carbide had full technical control over the UCIL plant and charged 2% of the total sales from the plant for its technical assistance, it could not shrug off responsibility for the disaster.

Meanwhile, on 3 February, the first of eight tribunals to disburse the final settlement of claims commenced functioning in Bhopal. However, it was unable to do any effective work till 22 June when the central government finally issued the guidelines regarding the quantum of payments payable to each category of victim.

The guidelines specified only seven categories of victims as eligible for compensation: death; permanent total or partial disability; temporary total or partial disability; injury of utmost severity; minor injuries; loss of belongings; and loss of livestock.

No compensation amounts were mentioned for losses of business or for mental agony and torture.

The maximum compensation for deaths was Rs.3 lakh, but those with severe injuries could get Rs.4 lakh. (Later, on a fresh representation from the state government, the central government enhanced the compensation for those who had died to an upper limit of Rs.5 lakh). Loss of belongings would be compensated upto Rs.15,000 and for loss of livestock, the maximum amount would be around Rs.10,000.

The guidelines were soon ridiculed by persons long involved in monitoring the disaster. Wrote Praful Bidwai and Anil Sharma in *The Times of India* (6 July 1992): 'The guidelines are flawed by a fundamental confusion about what is being compensated. In tort law, the principal damages are paid for injury or discomfort caused by (past) civil wrong such as negligence. Loss of earnings is a second, consequential factor. Further, if a disability arises and necessitates fresh expenditure or loss of earnings, that is yet another factor.'

Seen this way, the bulk of the compensation amount for fairly well-established health injury could have been quickly disbursed without detailed individual medical records. (In any case, this was the principle on which the Supreme Court had directed payment of interim relief to 600,000 victims). It was only after such a basic payment was made, that the Claims Courts should have begun to examine the claims of, for instance, those whose capacity to work had been impaired.

In July, the Lok Sabha passed the Bhopal Gas Leak Disaster (Processing of Claims) Amendment Bill which sought to delegate more powers to the Welfare Commissioner in Bhopal. And in October, the Supreme Court directed the Reserve Bank of India to transfer to the Welfare Commissioner the total settlement amount of Rs.1,482 crore which, till then, had been held in the name of the Registrar of the Court. The Court directed that no money from the fund would be utilized to meet any administrative expenses for the payment of interim relief currently being made to the victims by the center on the orders of the court.

The first few individual compensation awards were finally announced on 21 October, almost eight years after the disaster. Rs.2 lakh were awarded to the legal heirs of 45 year-old Rashid Khan who died of MIC on 31 May 1989, five years after the disaster and Rs.1 lakh was awarded to the heirs of Sarjoo Bai, a 60-year-old housewife who died on 21 February 1986. However, no money would be paid out until the statutory limit of 60 days laid down under the Bhopal Act was over, which meant that the awards would be encashed somewhere around Christmas, 1992.

The victims who were still to get interim relief were also not forgotten. In July, the Supreme Court directed the Union of India to make all efforts to see that the 100,000 gas victims left out of the scheme of interim relief were identified and included for the purpose. The Court was hearing a petition on the subject by the BGPMUS. Later on 6 November, the court extended the scheme for payment of interim relief to the additional one lakh victims upto February 1995.

As far as rehabilitation programs were concerned, there were not many successes. The *Indian Express* ran a story documenting how a proposal to set up an industrial estate that would employ over 10,000 gas-affected people had collapsed. The foundation stone of the special industrial area was laid in October, 1987. The proposal envisaged setting up small- and medium-scale industrial units over a 21-hect-

are plot. Industrialists were to be invited to set up only units which did not require heavy labor. However, due to differences between the union and state government over the quantum of central assistance to the project, not a single industrial unit was set up in the 170 work sheds that were completed.

Meanwhile, the international community continued to monitor the situation in Bhopal. The International People's Tribunal held a special session in Bhopal on the gas disaster and the state of the victims from 19-23 October. Several of the gas-affected victims testified before the tribunal. Victims of industrial hazards from twelve Asian countries also related their experiences. The tribunal's presence in the city had a major impact on quickening the disbursal of compensation to the victims. It eventually announced its judgment in Mumbai on 24 October, where it indicted key officials of the Union Carbide and its subsidiary for the disaster.

In October, another medical report from a fresh source confirmed serious problems affecting the gas victims. Dr S.R. Kamat, former head of the Department of Respiratory Medicine at the KEM Hospital in Bombay, together with nine others, published a study on lung-related disabilities due to the disaster in the US Health journal, *Environmental Health Perspectives.*

The study estimated that over 15,000 people in Bhopal had permanent injuries leading to permanent disability of the lungs alone. Dr Kamat's estimate was more than five times that assessed in this category by the Directorate of Claims in Bhopal and was based on a study of two years duration of 113 people exposed to MIC.

As usual on 3 December, the eight anniversary of the disaster, Bhopal again observed a *bandh* to mourn its dead. All shops and business establishments in the old city remained closed as a mark of respect to the victims. There were the usual prayer meetings attended by the governor, the chief minister and other political parties. Voluntary organizations convened rallies and meetings. The Bhopal gas disaster was becoming, to all intents and purpose, an almost routine annual ritual.

THE NINTH YEAR AFTER (1992–1993): The Charges Are Finally Framed

The extradition of Warren Anderson, framing of the charge sheet against UCIL officials, the commencement of the trial and the issue

of extending interim relief for the gas victims for another three years dominated events in 1993.

In March 1992, the CBI had itself sought an order for Mr Anderson's extradition to stand trial in Bhopal. However, during the trial in January, the CBI disclosed it was having second thoughts about going ahead with the extradition.

The Chief Judicial Magistrate of Bhopal had already issued a fresh directive to the CBI to expedite the extradition proceedings. In February, the next date of the trial, the CBI counsel informed the court that a letter rogatory had been sent through the Indian embassy to the US law department for extraditing Anderson to India.

In May, the CJM of Bhopal once again called up the matter and directed the CBI to initiate official level talks between the US and India on the process of extraditing Mr. Anderson. In his order, the CJM also said the court would give the CBI all the assistance it needed for an early extradition. As we shall see later, the CBI's delaying tactics would carry over well into 1994.

However, the most interesting aspect of the trial at this stage was the line taken by defense counsel in the proceedings. The UCIL counsel, Rajendra Singh, concentrated on proving to the court that none of the nine accused led by Keshav Mahindra (Chairman, UCIL) had, with any knowledge or intention, caused the flow of water into the MIC tank. Neither, he told the court, had any of the accused anything to do with the erection of the plant – it was constructed under the supervision of experts for Union Carbide, USA.

But the most significant part of his argument, however, was his claim that the water entering tank 610 (from which the gas leaked) could have been due to 'a rash act of negligence' by operators Rahman Khan and Salim who were both working in the plant on the night of the disaster.

Whatever Union Carbide may have wanted to hold in the case, UCIL at least was no longer relying on the claim that the disaster was due to an 'act of sabotage'! According to a report of the trial in *The Pioneer* (27 Feb.), defence counsel informed the court 'that the water did indeed enter tank 610 through the Relief Valve Vent Header (RVVH) as a consequence of the water washing being undertaken by plant personnel instructed to do so by their superiors.'

In later framing the criminal charges against the officials of UCIL, the judge was careful to make a distinction between five UCIL functionaries (including the former Works Manager) who were present in the plant at the time of the catastrophe and three senior officials – the UCIL Chairman, Managing Director and Vice President – who were responsible for the company as a whole. While the former were charged with culpable homicide not amounting to murder, voluntarily causing grievous hurt, etc., the latter were indicted under the same sections of the Indian Penal Code read with Section 35 which holds that each person who joins in a criminal act with criminal knowledge or intention is liable for it as if it were done by him alone.

Outside the court room, reality for the victims was once again threatening to turn bleak: payment of interim relief given on orders of the Supreme Court in 1990 for a period of three years ended in March despite the fact that final compensation in the claims courts was still stuck with the issue of how many people had died due to the gas. A pall of gloom descended upon Bhopal. The cessation of relief figured in the Lok Sabha as well, with members expressing concern about the issue.

Once again, the BGPMUS approached the Supreme Court, and succeeded. On 28 May, the Court passed an order extending the payment of interim relief for another three years as it was clear that at the pace at which the Claims Courts were working, it would take at least another five years before all the final compensation claims were paid out. To make the additional payment possible, the Court directed the release of Rs.120 crore out of the interest accrued from the US$470 million Settlement Fund.

However, the Bench now added a few conditions. It made clear that interim relief would not be continued for those victims who were either income tax assesses, government servants, employees of public sector undertakings and wealth and property tax-payers, sales tax assesses, or otherwise well to do. The Bench also directed that the Rs.120 crore should be returned without interest by the Union Government when it was required for the payment of final compensation.

The order was clearly another victory for the victim groups led by the BGPMUS, but it was assailed by the *Morcha* and some organizations of the state government employees on the ground that it amounted to a violation of the principles of natural justice and equal-

ity before the law. (The new conditions meant more than 90,000 persons would now be deleted from the list.)

In August, more than 1000 activists belonging to the BGPMUS courted arrest to protest against the procedure adopted for scrutinizing the claims in the second phase of interim relief. There were charges of corruption and irregularities in the distribution of the declaration forms which had to be submitted by the claimants and victims were forced to queue up for long hours once again at various identification centers.

In September, several organizations announced a series of fresh agitations to protest the undue delay in granting interim relief and to demand the scrapping of the office of the Relief Commissioner and the removal of corrupt and incompetent officials.

Storm clouds were also forming over the performance of the official machinery set up to make the final compensation payments.

By its order of 3 October 1991, the Supreme Court had directed the government to set up at least 40 Claims Courts in Bhopal latest by 3 February 1992. However, according to official records, only five Claims Courts were opened by that date. Thirteen more were added in July 1992, and an additional twelve in late January 1993.

In addition to the 30 Claims Courts, five Courts of Appeal functioned. The Welfare Commissioner, Justice Qureshi, presided over a *suo moto* Revision Court which decided only on cases where it was held that compensation awards should not have been made or were made in excess.

Till January 1993, almost the whole of the first year after the courts were set up, only claims arising out of deaths were heard. 1,710 claims were decided, of which 1,152 (67%) were rejected.

Victim groups found that the Deputy Commissioners heading the Claims Courts, and worse, even the Welfare Commissioner himself, were largely ignorant of studies conducted by the ICMR regarding health effects of exposure to MIC. This ignorance was coupled with a deep sense of suspicion on the part of the Commissioners that the majority of the claimants were false.

The courts, according to one jurist, seemed intent on following the logic of a miserly and outmoded torts law, long ago abandoned in Europe and the USA. Their insistence on the production of *postmortem* reports was wholly unreasonable and practically impossible.

Records from the Institute of Legal and Forensic Medicine in Bhopal, for example, showed that while the official list of deaths due to gas exposure had over 4,000 names, the total number of *postmortems* carried out was only around 960. In addition, the tortuous proceedings followed by the courts required the claimants to appear for a series of hearings and respond to an endless series of queries.

The depressing situation continued despite the observation of an appellate court that 'these proceedings are not criminal trials and the rules of proof there under cannot be applied to these welfare proceedings.'

The inability of the Deputy Commissioners to understand this basic principle was due to the fact that few of them had any experience of hearing tort cases, almost all of them being of civil judge rank. The Bhopal Act had envisaged that the compensation claims would be adjudicated by district judges. Unable to find 40 district judges, the Government had decided to make do with civil judges instead.

Lawyer Vibhuti Jha also challenged the manner in which the claims' hearings were being conducted, at a more fundamental level. He noted that under the Act the Central Government was duty bound to represent and prosecute the claims till these were decided to the victims' best advantage. However, in almost every case, the Deputy Commissioners (who were part of the government setup) did everything they could to obstruct the interests of the gas victims.

Eventually, in desperation, organizations like the *Morcha* began demanding the removal of the Claims Commissioner himself 'as the gas victims cannot expect any justice as long as he is at the helm of affairs.'

Thus, as Bhopal approached the ninth anniversary of the horrible disaster, if there was any anger now, it was less against Union Carbide than against the government's ham-handed approach to the disbursal of compensation. 10,000 gas victims were jobless on that day, as the work sheds in which they worked had been sold to industrialists.

Despite an expenditure of close to Rs.100 crore on medical care, more than 200,000 victims continued to display the effects of toxic poisoning without a proper line of treatment yet to emerge.

And the Government of India showed it had neither the commitment nor the inclination to pursue the extradition proceedings against Anderson to their conclusion.

On 3 December, the BGPMUS proceeded to announce a five-point charter of demands. It reiterated that the government set up the National Medical Commission; that all residents of the 36 wards be paid a flat sum as compensation without having to approach the Claims Courts; that the government take immediate steps to provide jobs to the victims; that those denied interim relief be given their dues forthwith; and that the Government take immediate measures to extradite Warren Anderson.

The attendance at some of the public meetings to mark the ninth anniversary was poor for another reason. Communal riots had broken out in some of the gas victim areas, as a result of the demolition of the mosque at Ayodhya the previous December. A hundred and forty people were killed in the riots in Bhopal. Since a large number of the gas victims were from the minority community and the BJP was the ruling party in the state, they had to bear the brunt of state terror.

Union Carbide's gas had not discriminated between Hindus and Muslims, but the events at Ayodhya succeeded in creating a wedge between what had hitherto been a single community of victims.

THE TENTH YEAR AFTER (1993–1994): Attempting to Down the Curtains on the Tragedy

Shortly after the disaster in 1984, the Government of India declared that its relief effort would be 'a model for future disasters.' The government of MP promised it would organize relief on a 'war footing.'

Ten years after, most gas victims would gladly consider rubbing the noses of all those officials in the vomit of these noble declarations of intent. Union Carbide, a profit hungry multinational, was expected to leave its victims in the lurch at the earliest possible opportunity. But who would have thought that Indian governments too would so easily proceed to stab the victims in the back?

In place of a 'model for future disasters,' the two governments gave the victims (and us) a total experience of what it would mean to face an industrially induced epidemic of the kind that Bhopal has come to symbolize.

The health condition of the gas victims in 1994 is best perceived through the eyes of the fifteen-member International Medical Commission on Bhopal (IMCB) which made a twelve-day tour of the gas-affected areas between 10 and 22 January.

The Commission was constituted following the recommendations of the Permanent People's Tribunal which had held a session in Bhopal in October 1992. It was set up by Dr Rosalie Bertell, President of the International Institute of Concern for Public Health, Canada and Dr Gianni Tognoni, Secretary General of the Permanent Peoples Tribunal, Italy. Its brief: to provide consultative support towards the Bhopal survivors' long-term medical care, health monitoring, and handling health problems related to exposure.

The GoI appears to have been hostile to the Commission from the start. A Pakistani expert member of the Commission was not granted a visa to come to Bhopal. Neither did the MP government cooperate with the team.

The Commission however visited hospitals and met bureaucrats, researchers and doctors involved with the medical care of the Bhopal survivors as well as representatives of victims' organizations.

The Commission's report, handed over to the press after the visit, noted: 'Even nine years after the gas disaster in Bhopal, at least four lakh survivors of the tragedy have been suffering acutely from breathlessness, chest pain, diminished vision, muscular fatigue, hypertension and anxiety, chronic depression, menstrual irregularities, tuberculosis of the lungs and other physical and mental illnesses, in the absence of proper and adequate treatment. Whatever treatment is available is simply symptomatic.' The report also stated that 'it is common to find ailing survivors indicating the amount of capsules and tablets consumed by them not in numbers, but in kilograms, with no improvement to show for it.'

One of the major revelations of the Commission was that it encountered evidence of long-term brain damage in the victims. It therefore called for broadening of the spectrum of diseases attributed to the Carbide gas release to include neurotoxicity and post-traumatic stress.

Commission members confirmed large-scale prevalence of impaired memory, loss of motor coordination and other neurotoxic changes within a belt of eight kilometers of the disaster site.

Dr Bertell informed the press that many of the chronic central nervous system diseases in the victims had been mistakenly assumed to be psychological, while actually these neurotoxic changes had a physiological basis. It was therefore necessary to re-orient treatment, and to evolve a definition of disability.

The Commission noted as 'unfortunate' that the ICMR data on the Bhopal gas victims was not freely available, resulting in a dissociation between the research studies on the population and the health care provided for it.

Even at this late stage, the Commission was still insisting that the 'medical records of each victim should be in the form of a health book which was imperative for proper diagnosis and management of chronic health problems.'

The Commission finally recommended setting up of an independent group, comprising victims' organizations, the Indian Government and international experts for examining the criteria for assessing the disabilities in the survivors.

Deploring the current hospital-oriented delivery of health care, the Commission recommended a shift in focus to a community-based approach, more suited to deal with the chronic nature of the problem. For this, it said, priority should be given to the implementation of a network of community-based clinics 'which would more equitably and efficiently provide routine care for the population while avoiding unnecessary pressure on hospitals.'

Here were experienced experts with known pro-public attitudes making vitally significant suggestions. However, because of a Supreme Court order, most future medical relief work would be concentrated instead in a grandiose, swanky Rs.65 crore hospital. Was there ever a mismatch of perceptions!

In its order of 3 October, the Court had directed Union Carbide to set up the 500-bed hospital in Bhopal within eighteen months. In February 1994, during the hearing relating to the shares of the company, the hospital issue again came up and the Court directed Carbide to have the hospital up within three years.

At the same hearing, the Court permitted Union Carbide to sell its equity in its Indian subsidiary, the UCIL, to raise capital for the new institution. The sale of the shares, however, was still subject to the supervision of the Supreme Court. Union Carbide had already

deposited Rs.18.8 crore with the Bhopal Hospital Trust in London. The balance Rs.46.2 crore was expected from the sale of the equity shares.

In May, Sir Ian Percival informed the press that preparatory work on the Rs.65 crore hospital was 'in progress.' In July, a group of ministers headed by Finance Minister Manmohan Singh decided to allow duty free import of equipment for the proposed hospital. (Many of the costly diagnostic and physiotherapy instruments bought earlier for Bhopal's older hospitals for the relief of the gas victims were still lying unutilized since the doctors did not know how to use them).

Eventually, on 9 September, Union Carbide successfully sold its entire 50.9% shares in UCIL to the Kolkata based McLeod Russell India Ltd, a company of the B.M. Khaitan group. The shares fetched a price of Rs.175 each, netting the Bhopal Trust a total sum of Rs.290.23 crore. Once the hospital's total cost of Rs.65 crore was set aside, the rest of the money would be made available to increase the Settlement Fund to pay compensation to the victims. Some of the money would also be used for setting up three rehabilitation centers in Bhopal.

What the International Medical Commission had discovered in respect of the gas victims' health situation, another Commission could well have unearthed in the matter of processing of claims for compensation as well. This was still being continued in the most bureaucratic fashion. Even after nearly ten years, the administration had not come to terms with the elementary fact that the money being disbursed to the gas victims was their due and not some bonus that was being doled out to them as a good will gesture on the government's part. The Claims Commissioners continued to make procedures as difficult as possible for the victims. Corruption became so rampant till in desperation, once again, the victims' organizations had to return to the Supreme Court.

In January, the BGPMUS filed a fresh application there alleging that the government 'was sitting on the Union Carbide settlement money and wanted to gobble up the entire amount.' The application alleged widespread corruption by lawyers and doctors and even the Claims Commissioners. Exorbitant rates – between Rs.10,000 to 12,000 – were being charged in addition to the routine fees, for having claims 'fixed', and, it was alleged, even doctors were demanding Rs.15,000 per head for deposing in favor of claimants.

According to the BGPMUS application, no compensation was being awarded for those who had suffered irreparable mental agony, physical pain and emotional trauma and distress. Claimants were being asked to prove beyond reasonable doubt that a particular death was due to gas exposure, despite the fact that most of them belonged to the unorganized low income group and had simply not understood earlier the importance of procuring postmortem reports, death certificates and medical records.

In April, the BGPMUS announced an indefinite *dharna* in front of the Welfare Commissioner's office in Bhopal, in protest against increasing irregularities In the payment of compensation to the victims. Abdul Jabbar Khan told journalists that when information about irregularities was given to the Commissioner, this was passed on to those who were responsible for the irregularities and they had in turn roughed up office bearers of the BGPMUS.

As if to underscore the truth of the BGPMUS's allegations, *The Times of India* reported in March a neck-and-neck race between two public sector computer and electronic corporations over a Rs.4 crore contract for a fingerprint technology system to minimize chances of impersonation by fake claimants among the 600,000 victims. Apparently, a central government committee headed by former Supreme Court Judge N.M. Kasliwal and which included, besides Justice Qureshi, the Secretary of the Chemical and Petrochemical Ministry, the Union Law Secretary, the Secretary, Finance and Expenditure and the Chief Secretary of the MP government, was considering the proposals.

There was no subsequent follow-up report on the race for the Rs.4 crore contract or who won it, but the proposal indicated how lopsided indeed the government's priorities had become. A government that had proved incapable of registering the claims of not more than 3,00,000 (out of 6,00,000) victims over a ten-year period, could become obsessed with trying to eliminate marginal numbers of fake claimants, even if this meant extremely expensive investments.

In May, Justice Qureshi passed an order instructing the Claims Courts to deal with all the compensation claims of the members of a family as one case and not to summon them individually. The order, which was ostensibly to expedite and facilitate early disposal of compensation claims, was being issued a full two years after the Claims Courts had begun their business.

Increasing frustration in assessing and entertaining claims led to assaults by victims on judges. In one instance, a judge had to be hospitalized after a victim assaulted him with a sword. Justice Qureshi conceded that specific complaints of corruption against Claims Courts judges had been admitted and examined and some judges transferred as a result.

Despite the turbulence caused by the victims, the Welfare Commissioner continued to reel off progress reports to the press. By mid-February 1994, according to Justice Qureshi:

— 10,000 of the 15,000 death claims had been disposed of.

— In about 1,500 death claims, the claimants did not appear in court.

— As more than 50% of the death claims were rejected by the courts, claimants filed appeals in the five Appellate Courts in about 3,500 cases; of these 1,347 were disposed of.

— Compensation totaling Rs.102.30 crore had been awarded in 23,318 cases, including 4,322 death cases (Rs.41.81 crore);

— The Appellate Courts increased the compensation in 966 cases by Rs.6.36 crore over the amount settled by the Claims Courts.

— Of the 20,000 physical injury cases cleared by the Claims Courts, more than 19,000 cases had been disposed of in favor of the claimants with compensation totaling Rs.54.12 crore.

The compensation awarded for each death worked out to an average of around Rs.1 lakh. In the personal injury cases, average compensation was around Rs.28,000. From this, the government deducted the Rs.200 per month interim relief paid out over three years. So the victims eventually got only around Rs.16,000.

According to Abdul Jabbar Khan, such a piddling compensation amount, coming almost ten years after the disaster, was simply ridiculous.

In the meanwhile, in the criminal court, the Anderson extradition was still lagging on the government's side. On 4 April, the CBI informed the court of the Chief Judicial Magistrate, Bhopal that 'action was being taken' for the extradition of Mr. Anderson. Nothing happened. Fed-up with such delaying tactics, the three main Bhopal gas victims' organizations, the BGPMUS, the BGPSSS and the BGIA

all filed separate applications asking for a direction to the Union Government to produce Warren Anderson. When the applications came up for hearing in September, the CBI once again promised progress 'in a month.'

Appropriately, the final scene in the Bhopal gas tragedy was the dismantling, in June, of portions of the monster Union Carbide plant itself. Victims' representative groups and journalists noticed that trucks had begun shifting material and equipment from the plant. When they protested (the criminal case is still pending against Union Carbide and UCIL), company officials denied there was any embargo on doing so.

The plant, however, was in the possession of the CBI which had seized it immediately after the disaster in 1984. The court of the Chief Judicial Magistrate, Bhopal, had also ordered its formal attachment on 30 April 1992. However, the appointment of a receiver had been stayed by the MP High Court.

It appears that after the Supreme Court order in the shares case in February, the CJM, Bhopal also amended the original attachment order. Taking advantage, the company commenced dismantling and shifting of the plant. (An earlier effort in February 1985 had been halted midway due to public protests). The only undertaking UCIL officials would give the public was that the MIC and Sevin plant would not be touched in the dismantling operations.

The dismantling of the plant was in a sense quite symbolic of the situation now in Bhopal which had attained some kind of finality with the administration.

A crime against humanity had been committed by an MNC in 1984. But a decade later, the scene of the crime was being cleaned up. The criminals had been absolved of the responsibility to look after the thousands of victims they had created. To the contrary, the victims of the crime were now being seen as the real nuisance. So what remained?

Precious little. Up to 1996, people would continue to receive their interim relief payments. A large new hospital, the construction of which would benefit an enormous number of officials, contractors and foreign equipment suppliers, would be installed to receive them when they were ill. However, since the doctors had failed to discover any remedy for MIC poisoning over the past ten years, it could rea-

sonably be predicted they would find none. Burnt out cases like Kailash Pawar would disappear from time to time. Eventually, the hospital would be opened to other patients as well.

The time then had surely arrived to bring the curtains down on the world's worst industrial disaster. Even if, behind them, the scenes related to one of the greatest tragedies to hit the human race would continue to be enacted without prospect of an end or now, even an audience, in sight.

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11

Bhopal Twenty Years After

by Nityanand Jayaraman*

On the eve of the twentieth anniversary of the Bhopal gas disaster, the mood in Bhopal is decidedly upbeat. Global solidarity for Bhopal has never been stronger. Twenty years after the disaster, the struggle of the Bhopalis against a giant American corporation continues to inspire people and capture media space. Bringing Union Carbide Corporation to face criminal trial in Bhopal seems distinctly possible for the first time since 1994 when the Supreme Court of India virtually let the multinational company escape from the criminal case by allowing it to sell off assets attached by the Bhopal court to enforce its appearance. Two courageous women survivors and trade unionists – Rashida Bee and Champa Devi Shukla – received the prestigious Goldman Environmental Award for their roles in the struggle for justice in Bhopal.

It is both remarkable and unfortunate that over twenty years, the core demands – one, criminal prosecution of those responsible; two, clean up of contamination; three, economic and medical rehabilitation; and four, just compensation – remain fundamentally unchanged. Despite the seeming lack of progress, the second decade of the Bhopal disaster has seen the struggle for justice in Bhopal move inexorably

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along with an unerring and steady gait towards the realization of all demands.

Rather than despair at the total lack of Government support for medical or economic rehabilitation, survivors' organizations and their global supporters are taking on self-employment schemes and engaging in medical rehabilitation efforts that are, in themselves, statements against the corporatization of life.

In short, there are many reasons for hope, although not one has to do with a change of heart in the Indian Government, the U.S. Government, or Dow Chemical Company, now the owner of Union Carbide.

Safeguarding the Compensation Money!

Though the settlement approved by the Supreme Court had required Union Carbide to deposit a sum of US$470 million to compensate the victims, a huge amount of Rs.1503 crores (US$300 million at current exchange rates) had accumulated (due to devaluation of the Indian Rupee and other reasons) which was now awaiting disbursal as well. Politicians were eyeing this amount for their own popularity programmes.

The first rumblings of trouble for the compensation money came in June 2002, when the Group of Union Ministers on Bhopal announced its intention to distribute these remaining compensation funds to 20 additional municipal wards in the city. The Indian Council for Medical Research had already declared these wards unaffected by the disaster, and had even drawn its control samples from among these wards for its health studies. Political observers from Bhopal recognized the ploy for what it was – a vote-capturing tactic aimed at luring the predominantly Hindu dominated wards with a promise of compensation money.

A portion of the balance of settlement funds was also sought to be used to clean up Union Carbide's toxic mess in Bhopal. Was it just coincidence that the Indian Government proposed this idea for the first time less than a month after Dow CEO Michael Parker suggested to Bhopal campaigners that the compensation funds should be used for this purpose?

The decision of the Government predictably drew harsh criticism from the Bhopal gas survivors and their supporters.

By the end of June 2002, two survivors – Rashida Bee and Tara Bai – and longtime Bhopal activist Satinath Sarangi had launched an indefinite hunger strike. Having just completed a solidarity building tour in the US, the National Campaign for Justice in Bhopal (later expanded to the International Campaign for Justice in Bhopal) decided to add a cybertwist to the Gandhian protest. Working with a team of volunteers, and activists from UK, USA and India, the Campaign decided to use the internet to provide a means for on-the-ground organizing and for sympathizers to channel their support to the fasting Bhopalis.

On 18 July 2002, a Texan fisherwoman Diane Wilson – whose livelihood had been destroyed by toxic discharges from Carbide's factory – picked up the hunger strike after two of the three Bhopal hunger strikers collapsed during a rally. Wilson, who is part of women's networks such as Unreasonable Women and CodePink and has her own following, in turn inspired others to fast in solidarity with the Bhopalis.

A global relay hunger strike was launched. Supporters from around the world were invited to join the Bhopalis by fasting for a day or longer. Some fasted in groups, and others individually. Some fasted for a week, others for a day, and yet others committed to fasting every Tuesday or Wednesday until the matter was resolved. Supporters organized protests outside Indian embassies in the US, UK and South Africa; others held vigils in public places. Protests, vigils and fasts were held in places as diverse as Barcelona, Cape Town, Castelfranc, Dharmapuri, Kancheepuram, Spokane, Venice, and Yelleswaram.

For a change, cyberactivism was something more than just pushing a button to send a petition. More than 1500 people had fasted by 28 August 2002 when Chief Judicial Magistrate sent the Central Bureau of Investigation (CBI) packing with an admonition and an order to expedite the extradition of Warren Anderson from the US to India. On the balance of compensation issue, the Union Government caved in even before the Bhopalis ended their strike. The Government announced that these funds would not be diverted to non-survivors or for purposes other than compensating the survivors.

On 19 July 2004, survivors scored a major victory against the Indian Government when the Supreme Court ordered it to distribute the entire Rs.1503 crores of the accumulated balance of compensa-

tion money to the survivors. 'Divided between more than half a million people, this isn't El Dorado; in many cases it will not cover what people have spent on medicines. But it is nonetheless a great victory and was celebrated as such in the *bastis* and *bidonvilles* of Bhopal,' noted a spokesperson for the International Campaign for Justice in Bhopal.

If the Government implements the order promptly, the city's more than 500,000 survivors will get about Rs.25,000 on average – slightly more than Rs.1000 for every year of suffering since the disaster.

The shameful settlement negotiated by the Government of India with Union Carbide in secret stands exposed when one considers the facts. In a scathing editorial discussing the July 2004 Supreme Court order, *The Hindu* wrote: 'At the time of the settlement, both [Carbide and the Indian Government] held that only 3000 people had died and some 10,000 others had been affected. Today, when the full extent of the tragedy is known, with over 17,000 deaths and 566,786 people whose claim for compensation has been affirmed, the settlement amount appears a travesty, a pitiful underestimation of the value of human lives.'

Given that the Indian Government itself places such a low value on the lives of its citizens, Dow-Carbide's now famous dictum that '$500 is plenty good for an Indian' causes little surprise.

By any account, Rs.1503 crores is a large sum of money to come all at once into a city. Within weeks of the Supreme Court order, Bhopal moneylenders began charging interest of up to 150 percent on loans being taken by survivors. But at least the leaders of survivors' organizations had wisened up. In anticipation of the compensation distribution, survivors' organizations put up wall posters warning people of touts, and providing hotline numbers on which to register complaints of extortion. They have negotiated a deal with the Post Office where survivors can open accounts with a minimum balance of Rs.50, and can register any complaints with an ombudsman of sorts at the Post Office. While this may not eliminate corruption, it can at least be now said that the victims have learnt some lessons from their post-disaster experiences.

The extradition of Warren Anderson

Earlier, on 24 May 2002, the Union Government had instructed the Central Bureau of Investigation to dilute criminal charges against

former Carbide chairman and Union Carbide Corporation changing these from 'culpable homicide not amounting to murder' to a 'rash and negligent act.'

Many observers rightly concluded that the Government's actions were the result of a fresh round of lobbying by the US Government on behalf of the American company and Anderson. Ironically, it was the Government of India – the prosecutor in the case – which was pleading with the court to dilute charges against Warren Anderson, a fugitive from justice. In July 2002, *Frontline* magazine's V. Venkatesan disclosed that the opinion behind the Government's application for reducing the charges against Anderson was tendered by Attorney General Soli Sorabjee way back on 6 August 2001 to the Ministry of External Affairs. The opinion dealt with whether or not extradition proceedings against Anderson were legally sustainable under the Indo-American extradition treaty.

Venkatesan went on to observe that 'Sorabjee's 2001 opinion has probably convinced the Government of India that it would be advisable to remove this irritant in the Indo-U.S. relationship, especially post-September 11, by legally jettisoning the extradition proceedings against Anderson. This, it has discovered perhaps belatedly, would not be possible unless the charge against Anderson is legally diluted from "culpable homicide" to a "rash and negligent act," as the U.S. would then not have to consider the offence serious enough for extradition.'

The US Government's active interest, and even intervention, on behalf of Union Carbide and Anderson, has been somewhat of an open secret. In fact, some 1994 documents unearthed via a Freedom of Information request filed in the US in 2002 suggest fairly high profile communications between the US embassy in New Delhi and the US Secretary of State, Department of Treasury and Department of Commerce. One cable dated February 1994, for instance, discloses how the US Embassy in New Delhi has been functioning as an arm of Union Carbide in arranging for the sale of its assets through its Economic Office. The same cable also notes that 'former Union Carbide Chairman Warren Anderson remains a target of demands for a GOI extradition request,' indicating that the US Government was not only monitoring the Carbide developments as a matter of priority, but that issues such as Anderson's extradition are a continuing cause for concern to it.

Around the same time, Carbide chairman and fugitive from justice Warren Anderson – who was untraceable for years – was finally found by Greenpeace and the *Daily Mirror* living a life of luxury in retirement in New York's elite Hamptons. Following his discovery, Anderson's tranquil existence began to 'marred' by constant reminders of his role in causing the Bhopal tragedy by campaigners protesting outside his house.

It took another year's relentless pressure building and breathing down the CBI's neck by the Bhopal court and survivors before the Government of India finally, and secretly, sent an extradition notice to the US Department of Justice through its embassy in Washington D.C. in May 2003.

The contents of the package sent by the CBI have not been made public by either the Indian Government or the US Government. In July 2004, the CBI announced in the Bhopal court that its extradition request had been returned by the US Government on technical grounds. In all likelihood, India's submission of the extradition request may have reflected an understanding with the US Government to allow India to carry out the Bhopal Court's orders without incurring the Superpower's wrath.

Given that it took more than ten years for the Indian Government to summon the courage to send a notice for the extradition of an American corporate CEO, it is quite likely that the Government is hoping that it can delay action on this count till Anderson, now 82, dies a natural death.

The Games Corporates Play

In 1996, the Supreme Court diluted charges against the nine Indian accused from 'culpable homicide' to 'rash and negligent act.' This move was prompted, in part, by the fact that a lion's share of the culpability lay with UCC. Let's turn our attention to the absconder UCC after stating for the record that the case against the Indian accused has proceeded at a snail's pace since 1996, indicating that the CBI is not too hot about this prosecution either.

Secure in its safe asylum in the United States, absconder Union Carbide Corporation had declared in 1996 – in its returns filed before the US Securities Exchange Commission – that 'Criminal proceedings continue in India, arising out of the 1984 gas release from the Bhopal plant of Union Carbide India Limited. The corporation has

not appeared in those proceedings. . .the criminal proceedings in India should not have adverse financial consequences for the corporation outside of India.'

For the corporation and its shareholders, the crime of wiping out a city was reduced to a considered legal opinion on whether or not the profits of the company would be affected.

If the case against the Indian accused was moving slowly, the case against UCC was not moving at all. The Indian Government was unable to enforce the appearance of UCC to face trial.

On 6 August 1999, Union Carbide announced its intent to merge with Midland, Michigan-based The Dow Chemical Company.

The ever-alert Bhopalis countered with a press conference on 8 August 1999, and a letter to the Dow CEO denouncing the merger and reminding Dow of the liabilities it would inherit by acquiring Union Carbide.

In February 2001, the merger was finalized and Union Carbide became a 100 percent subsidiary of Dow.

Dow is no stranger to toxic legacies. Infamous for its harmful products such as silicone breast implants, PVC, Agent Orange and the sterility-inducing DBCP pesticide, Dow is a big polluter in its own right, with a fair share of toxic skeletons in its own closet. Together, Dow and Carbide would become one of the world's largest chemical corporations. Unfortunately for Union Carbide, its attempt to disappear into Dow and lose its Bhopal stigma in the process was to be its undoing.

Bhopal campaigners now decided to turn the merger to good advantage. Unlike Union Carbide, which had no assets in India, Dow had substantial investments, a joint venture company and aspirations to expand markets and production in India. After years, the Bhopal campaigners didn't have to travel too far to find a suitable corporate face to tarnish.

On 28 February, 2001, Dow got a taste of nonviolent satyagraha Bhopali-style when more than 300 Bhopal survivors and 100 trade union supporters from Mumbai laid siege to Dow Chemical's India headquarters in the city for more than four hours. Dow staff ran into their building and locked the doors from inside, while the Bhopalis hung their banners that read: 'Killer Carbide is now Dow Chemical.'

Survivors placed their palmprints in bloody red on Dow's shining exterior.

In March, 2001, Dow India slapped the Bhopal victims with a lawsuit demanding that Carbide's victims pay damages to Dow India for disrupting the company's business. This was to be the first of three protests, resulting in two lawsuits by Dow against the survivors.

Even while Dow sought legal intervention to prevent Bhopalis from bringing their demands to its office in India, Dow's own disrespect for Indian law drew the ire of US legislators. In July 2003, eighteen US congresspersons wrote a stern note to Dow. In the letter, the legislators – led by Frank Pallone – wrote: 'More disturbing is the manner in which Union Carbide and Dow Chemical have ignored the summons of the Bhopal court. This exposes a blatant disregard for the law.'

Meanwhile, documents unearthed in 2002 through discovery in a class-action filed in New York by survivors revealed for the first time that Union Carbide Corporation knowingly deployed untested technology, including at its MIC plant in Bhopal. The key findings of the discovery are summarised by www.bhopal.net (the website of the International Campaign for Justice in Bhopal) in an expose called the 'Poison Papers'.

An internal memorandum dated 2 December, 1973, which accompanied Union Carbide's then proposal stated, 'The comparative risk of poor performance and of consequent need for further investment to correct it is considerably higher in the UCIL operation than it would be had proven technology be followed throughout. CO and I-Naphthol process have not been tried commercially, and even the MIC-to-Sevin process as developed by UCC, has had only a limited trial run. . . UCIL finds the business risk in the proposed mode of operation acceptable, however, in view of the desired long-term objectives of minimum capital and foreign exchange expenditures.'

Speaking at a press conference on 14 November, 2002 to coincide with the release of the 'Poison Papers', Satinath Sarangi of the Bhopal Group for Information and Action said: 'Union Carbide built the MIC unit in order to retain control, they used untried technology to keep control, they underfunded it to keep control. When it turned Bhopal into a gas chamber, they said they'd had no control.'

By 26 February 2004, about a month after the third protest outside Dow's Mumbai office, the Bhopalis turned the tables on Dow. An application filed by the Bhopal Group for Information and Action in the pending criminal case requested the court to issue summons to Dow Chemical, asking the company to produce its wholly owned subsidiary UCC in court to face trial.

At the time of writing, the court was awaiting a response from the US headquarters of Dow. Legally, Dow can be charged with the crime of 'harbouring a fugitive' – namely, Union Carbide – should it refuse to cooperate. Even worse, Dow stands to lose control of its assets in India if it fails to produce the fugitive corporation.

Activism and People's Participation

Bhopal victims spent the first decade since the disaster (1984 to 1994) learning that courts and governments are not to be trusted. The decade that followed however saw the Bhopal campaigners making bold strides into uncharted terrain – shareholder activism, cyber-organising and student solidarity.

Between 2002 and 2003, Bhopali women successfully waged the *jhadoo maro Dow ko* (which translates into 'Whack Dow with a Broom') campaign in which women collected their used brooms and sent them to Dow as a warning. 'Brooms are the weapon of choice for Indian women. When people misbehave, we wield the broom to teach them a lesson. If Dow doesn't clean up its act, we will sweep its business away from India,' said Champa Devi Shukla, a leader of the Bhopal Gas Peedit Mahila Stationery Workers Association, a trade union of gas-affected women stationery workers.

Not only did Bhopali women visit Dow offices worldwide to present surprised CEOs with brooms, they also inspired many other women to do the same. *Jhadoo Maro* rallies were organized in Mumbai, Chennai, Pondicherry and Cuddalore.

Simultaneously, student mobilization too picked up. Within a year of the international campaign, the number of US campuses with Bhopal support groups had grown from 4 to 26. When the International Campaign for Justice in Bhopal announced its Global Day of Action Against Corporate Crime to coincide with the nineteenth Bhopal anniversary, students from more than 25 campuses in the US and India took action against Dow Chemical. According to ICJB's student coordinator Ryan Bodanyi, 'This was the first and biggest

student protest of its kind against Dow since Vietnam.' During the Vietnam war, Dow was condemned for its role in supplying chemical warfare agents such as napalm and Agent Orange.

While Dow's public image was taking a beating, critical support was building up in an entirely new and unexplored quarter. In December 2002, socially responsible shareholders began urging Dow to address its liabilities in Bhopal. But the company continued to evade questions and mislead shareholders about these liabilities.

However, in April 2004, Innovest – an independent investment risk analyst – released a report titled 'Dow Chemical: Risks for Investors,' pointing out that Dow's environmental liabilities include 'many large scale challenges converging all at once.' The report emphasized that Dow's unresolved liabilities in Bhopal, Vietnam and the asbestos suit to name a few should cause concern to investors.

At the 2004 Dow shareholders meeting, Boston Common Asset Management – a socially responsible investment firm – sponsored a resolution that asked Dow to report on the potential Bhopal-related liabilities it faces given the pendency of a criminal case and a class action suit against its subsidiary Union Carbide.

The Bhopal resolution secured about seven percent votes at the Dow AGM held in May 2004 allowing it to be tabled again next year. While the resolution itself does not do much more than alert a largely apathetic shareholder community of potential damage to the value of their stock, any development that brings these liabilities closer home to Dow will automatically lend more legitimacy to such resolutions and make it difficult for the company to ignore criticism.

The inclusion of Dow in the criminal case in Bhopal may put the company in serious trouble with its shareholders for having withheld from them information about the potential liabilities related to the criminal case. The crimes that Union Carbide is charged with, under Indian law, can fetch it a penalty whose maximum is limited only by the ability of the guilty party to pay and the magnitude of the crime. If there is one thing shareholders do not like, it is the uncertainty of returns with the possibility of huge liabilities.

Messing Up the Clean Up

Pollution and injury from Union Carbide's toxic wastes predates the disaster by at least a decade. Carbide dumped all its wastes on open

ground until 1977, when it began dumping some of its wastes into solar evaporation ponds over fourteen hectares that it constructed about half a kilometre north of its factory.

After the disaster, in its hurry to skip town, the company abandoned several hundreds of tons of toxic pesticides like hexachlorocyclohexane and residues of Sevin and naphthol. The drums and sacks are now rotting and lying in the open or in sheds that are partly open to the elements.

The skeleton of its old factory sticks out of the undergrowth as an eerie reminder of that fateful day. Chemical reactors have since burst at their seams spilling their noxious contents on the ground.

Every monsoon season, the rain leaches some of these poisons into the groundwater. The Indian and Madhya Pradesh Governments have done precious little to contain the spreading toxic plume in the groundwater. To avoid having to deal with the bigger problem of having the toxic wastes cleaned up, the MP Government simply denied that the groundwater was contaminated. This despite the fact that reports submitted by the State Research Laboratory (from the MP Public Health Engineering Department) in 1991 and 1996 found the water to be contaminated and unfit for drinking 'due to chemicals used in the Union Carbide factory.'

In 1996, the MP Government's Department of Gas Relief and Rehabilitation stated in its 1996–2001 Action Plan that alternative drinking water supply was required for the communities living near the Carbide plant.

In 1997, the Bhopal Municipal Corporation declared the water in 250 tubewells in the area adjacent the Union Carbide factory 'unfit for drinking.' Neither were the wells capped, nor was an alternative source of drinking water provided to the *bastis*.

Yet five years later in 2002, the Gas Relief Minister Arif Akeel dismissed concerns about water contamination by drinking contaminated water from one of the worst handpumps, in front of the media. Locals present at the time say that hidden from the glare of the media cameras, Akeel promptly stuck his finger down his throat to vomit what he had drunk.

On 9 July 1998, the MP Government reclaimed the UCIL site from the company (now renamed Eveready Industries India Ltd [EIIL]). A letter dated 26 June, 1998, from the District Industries Centre of the

MP Government is on record to show that the Centre reminded EIIL of the latter's earlier communiqué that none of the lease terms were being violated. The lease deed clearly states that the land had to be handed back in its original condition.

Between 1990 and 2001, numerous Governmental and non-governmental organizations, including agencies such as NEERI commissioned by Union Carbide, studied and confirmed the presence of aboveground, underground and groundwater contamination caused by Carbide's toxic wastes.

A 1999 study by Greenpeace found mercury levels within the site at between 20,000 and 6 million times above established background levels. Subsequent studies by the Fact Finding Mission on Bhopal found many of Carbide's chemicals in the breast milk of mothers living near the factory.

The contamination of groundwater has exposed both gas-affected – and other people who moved into the neighborhood after the disaster. Data from a health camp held by Sambhavna health workers in Atal Ayub Nagar – an area affected by water contamination – showed that out of 141 females that attended the camp, 133 were anaemic. The corresponding data for males was 39 out of 40.

Union Carbide and, now, Dow have refused to take responsibility for clean-up of the site claiming that the site has to be cleaned up by its new owner – the MP Government. The MP Government has neither the political will nor the technical expertise and resources to handle a task of this magnitude.

Finally, after all hopes of intervention by the Indian Government to force Union Carbide to clean up the wastes failed, Bhopal survivors approached the US Federal Court in New York in 1999 seeking, inter alia, a clean up of the toxic wastes and contamination by Union Carbide. Requests to the State and Central Governments to file a supportive application in the New York court were ignored. The Government of India's behaviour is in sharp contrast to that of the Government of Vietnam which openly declared its support to the class action filed by Vietnamese victims of Agent Orange against Dow Chemical and other manufacturers in US courts.

The Indian and Madhya Pradesh Governments, in fact, have been openly hostile to the demands of Bhopal survivors. In November 2002, survivors and their supporters entered the Union Carbide factory to

demonstrate to the Government that the long-overdue safe containment of the toxic wastes was technically feasible, and needed to be done. Rather than appreciate their effort, the Madhya Pradesh Government set the police on the nonviolent demonstrators. The demonstration was aborted after the police beat up and dragged the activists to jail for trying to contain the poisons from spreading any further.

Meanwhile, the US class action was going through its own twists and turns. In March 2004, after numerous dismissals, appeals and reinstatements, the Second Circuit Court of Appeals in New York remanded the case to the Federal Court ruling that Union Carbide can be ordered to clean up its abandoned factory site only if 'the Indian government or the State of Madhya Pradesh seeks to intervene in this action or otherwise urges the Court to order such relief.'

The Federal Court was almost begging the response. But after more than a month had gone by – with the file having done the rounds of the Ministries of Chemicals, Environment and Law – the Bhopal campaigners were forced to resort again to an indefinite fast. On 17 June 2004, Rashida Bee, Shahid Noor and Satinath Sarangi began their fast – this time without even water – given that the court's deadline to receive the letter from the Indian government was just round the corner, on 30 June, 2004.

The Law Ministry was the main obstacle. H.R. Bharadwaj, the minister who proudly professed to be one of the architects of the 1989 settlement, refused to act on the request on the baseless premise that the 1989 settlement addressed all claims, including those related to environmental contamination.

Within four days of starting the hunger strike, more than 2500 faxes had been sent to the Government of India. The Indian embassies in the US and UK were flooded with messages. The Association for India's Development in the US mobilized the Indian diaspora which engaged in a frenzy of activity. Demonstrations were held repeatedly outside Indian embassies in Houston, Washington D.C. and New York. Calls were made to the Indian embassy, the Prime Minister's office and the Ministry of Chemicals.

A newly formed student group – We For Bhopal – from the Hindu College in New Delhi reminded the President of India of his commitment a few months earlier to take up precisely this issue with the Government. The President kept his promise. The trade unions came

out in solidarity and pressed the matter with the Prime Minister. Retired Chief Justice of the Supreme Court V.R. Krishna Iyer weighed in with his opinion that 'there are no legal hurdles before the Indian government in submitting. . .a letter before the concerned US court.'

Finally, advised by senior Congress leaders like Oscar Fernandes and Kapil Sibal, the new Congress-led Government gave in to the Bhopalis' demands. By 23 June, 2004, a petulant law minister accepted the Bhopalis' reading of the law, and conceded that the 1989 settlement pertains only to disaster-related damages, and not to the liabilities arising from Carbide's bad housekeeping or routine pollution.

An application to the New York court was finally sent just two days before the deadline expired. Kalpana Sharma, writing in *The Hindu* in July, captured the irony of it all: 'What seemed on the surface to be a straightforward affair, particularly as it did not involve any costs to be borne by either Government, became a protracted affair with three people going on a fast unto death. Was all this necessary? Given the tame manner in which the drama finally ended, it would seem not.'

At the time of writing, residents of the water-affected bastis are preparing to begin an indefinite relay hunger strike for supply of clean drinking water. Even a recent Supreme Court order dated 7.5.2004 directing the Madhya Pradesh Government to arrange for piped drinking water to the locality has so far been ignored.

Health be Damned

The first decade after the disaster closed on a sobering note. The Indian Council on Medical Research wound up its work in Bhopal shortly after the tenth anniversary as if to signal that the medical crisis was over. Earlier that year, the International Medical Commission on Bhopal (IMCB) had observed that 'Even nine years after the gas disaster in Bhopal, at least four lakh [400,000] survivors of the tragedy have been suffering acutely from breathlessness, chest pain, diminished vision. . .in the absence of proper and adequate treatment.'

In December 1996, the IMCB released its report that recommended that –

a) Neurotoxic and post-traumatic disorders be included in the spectrum of diseases attributed to the disaster;

b) Bhopal should be adopted by the Indian authorities for the implementation of their stated policy on community health-based approaches;

c) Data collected by the Indian Council of Medical Research should be disseminated widely.

The end of the first decade also saw Union Carbide let off the hook by the Indian Supreme Court. UCC shares attached by the Bhopal court in the criminal case were allowed by the Supreme Court to be sold, ostensibly to fund the Bhopal Hospital Trust. Less than four years after passing the order, Justice (Retd) A.M. Ahmadi, the Supreme Court judge who allowed UCC to sell off the shares, became the chairman of the re-christened Bhopal Memorial Hospital Trust (BMHT).

Health care professionals, including members of the IMCB, pointed out that BMHT's plans lacked a community health care perspective, and placed undue emphasis and budgetary allocation for facilities not related to gas exposure such as cardio-thorasic surgery, and the use of harmful and unnecessary drugs in the community clinics. In 2000, New Delhi-based Dr. Atanu Sarkar analysed the drugs prescribed in BMHT-run clinics and found that 26 percent of the drugs prescribed were harmful, 49 percent unnecessary, and 8 percent both harmful and unnecessary.

As if in sharp contrast to everything the BMHT stood for, the Sambhavna Trust began with a fraction of BMHT's capital in 1995. A clinic was set up by the Trust in 1996 to deliver health care emphasizing a community approach and drug free therapies. Treatment at the clinic consisted of a judicious marriage of Indian and Western systems of medicine, including *yoga, pranayama, ayurveda* and allopathy. Equally important to the Sambhavna Trust was the development of a treatment protocol for specialized patterns of ailments of gas victims, community organization and long-term health monitoring of survivors and their children.

Sambhavna intends to inaugurate its new clinic – complete with its own herbal garden, and space for formulating ayurvedic medicines – on 4 December 2004, the twentieth anniversary of the gas disaster.

Barring the message of hope from Sambhavna, the situation at the end of the second decade is bleak. If nothing, the ranks of the ill

and ailing have grown. Emerging evidence confirms fears that children born to gas-affected parents are more likely than not to suffer health deficits.

The magnitude of the health crisis in Bhopal is daunting. Maybe the 2004 order of the Supreme Court (in the case filed by BGIA and BGPMUS) appointing an independent monitoring committee to oversee health monitoring and rehabilitation work in Bhopal will help change things in the future.

Livelihood: Taking Control

Shahid Noor, his brother Wahid and sister Nilofer, were orphaned by the gas leak. All were severely exposed. They managed to put themselves through school using the compensation money. From time to time, the Madhya Pradesh Chief Minister would ferret out orphans like Shahid to put a face to his Bhopal anniversary enactments of the 'compassionate State.' The orphans are now in their twenties, and desperate for jobs. Most are educated, having put themselves through school and college with no help from the Government.

Numerous promises and photo-ops later, Shahid and the other Bhopal orphans realised the hollowness of politicians' promises. On 7 July 2002, Shahid and his friends went on a hunger strike. Their demand was directed at the (former) Chief Minister Digvijay Singh. 'Digvijay had always promised to help us orphans. In 1994, on the tenth anniversary of the disaster, Digvijay called us to his house and made a public pronouncement that all of us would be provided with jobs. He said it in the presence of media people and it was published in several newspapers,' recalls Shahid.

The hunger strike ended with yet another promise of a loan to start small businesses. Now, two years later, that promise is yet to be fulfilled.

Shahid's story sums up the official response to the economic crises facing the survivors. With more than 150,000 chronically ill, of which 50,000 are too sick to work for a living, economic rehabilitation, a key demand of the survivors, remains totally unaddressed.

Till date, not one job has been created for the survivors by any conscious act of the Government. The Bhopal Gas Peedit Mahila Stationery Karmachari Sangh, a trade union of gas-affected women stationery workers, representing the only remaining beneficiaries of the

Government-run economic rehabilitation schemes, survived solely because the women fought to create the jobs, and then to keep them. Even here, they were denied the wages and benefits due to Government stationery workers, despite performing comparable duties.

In July 2003, the Industrial Court ordered the Government to regularize the women stationery workers and pay them back wages from 1998. The MP Government has appealed the order in the High Court.

Meanwhile, Shahid and two other youth, have become part of an income-generation initiative by the International Campaign for Justice in Bhopal called Project Chirag. Based on making available to them thirty photovoltaic solar lanterns – and training in using them – the business involves maintaining and lending out the lanterns to vendors in the Bhopal market at Rs.8 for five hours. The venture is expected to generate approximately Rs.900 per month for each of the youngsters in the initial phase.

'Our group was formed to give voice to the demands of the orphans of the disaster for income generation schemes. We are confident that we will be able to run this environment friendly income generation project and some of us will be able to earn some steady income. More importantly, it will give us the wherewithal to continue with our struggle for economic rehabilitation by the government,' says Noor.

In April 2004, Rashida Bee and Champa Devi announced that they would set aside a third of the Goldman award money to finance right livelihoods among women survivors. The International Campaign for Justice in Bhopal too decided that they would mark the twentieth anniversary with an increased emphasis on healing and rebuilding Bhopal.

While projects like Chirag can light the way for economic rehabilitation, the magnitude of the livelihood problem cries out for institutionalised intervention by the Government. But notwithstanding this and other problems facing the Bhopal survivors, the accomplishments of those involved with the struggle for justice give hope for the future.

A 'Model' for Future Disasters?

It is now two decades since the Government of India declared that its relief efforts in Bhopal would be a 'model for future disasters.' In a

twisted sense, the Government has kept its word. In their search for justice and rehabilitation, Bhopal survivors have been subjected to humiliation, and revictimised by a perverse legal, medical and bureaucratic system. As in Bhopal, victims of small and large industrial disasters in other parts of the country have suffered numerous indignities and failed to receive any compensation, any medical assistance or economic rehabilitation. Neither have the corporate perpetrators of the disasters been punished in any of these cases.

In India and elsewhere, the story of Bhopal, and its subsequent pain and suffering, continues to unfold even today. The infrastructure for a thousand Bhopals has been put in place, and victims are being told that their suffering is justified in the interests of the greater common good. I can recall at least ten industrial accidents in India involving loss of life, injury and/or serious damage to the environment involving big names like Hindustan Insecticides Ltd, Chennai Petroleum Corporation Ltd, Chemplast Sanmar Ltd, Southern Gas Ltd. and Tanfac Industries Ltd. Till date no criminal action has been taken against these corporations, and the victims are yet to be compensated.

Corporations have more rights than people, and their limited liability status ensures them immunity even as they rob you naked, poison your drinking water or maim an entire city. In deciding or evaluating the punishment to the perpetrator of such crimes, shareholders and even judges will talk about fairness to the errant corporation, rather than justice to its victims.

Corporations and democracy cannot coexist. Another Bhopal can and will happen, unless peoples' organizations around the world unite to challenge the corporate takeover of the world that is currently underway. But as we well know, politicians and capitalists are united in their greed, while we – the people – are divided in our diversity. Anyone in Bhopal will agree with that.

That said, though, Bhopal remains a City of Hope – a place associated with a struggle that has evolved experientially over twenty years of pitched battle against the combined might of the corporation, the US Government and the Indian Government, to become what it is now – a sure-footed and able-bodied movement in the prime of its youth poised with the stamina required to carry on the fight until justice is done.

Slow-Motion Justice for Bhopal 's Gas Victims

By Praful Bidwai*

The Supreme Court judgement ordering disbursal of Rs.1,503 crores to the Bhopal toxic-gas disaster victims is a significant, if long-delayed, victory. It acknowledges that the destruction wrought by Union Carbide in the world's worst-ever accident was far greater than thought 20 years ago.

Indeed, the Supreme Court itself underestimated the havoc by a factor of five while approving a 1989 settlement with Carbide. From 3,000 deaths, the toll has climbed to 15,310.

Equally, society itself seems to have recognized the colossal injustice visited upon Bhopal's victims.

That's the meaning of a recent New York judgement ordering Dow Chemicals, Carbide's successor, to clean up the toxic residues in Bhopal at its expense.

In reality, the Bhopalis have been re-victimised by UCC over the years through the poisoning of their water by the residues. They can now hope to get clean drinking water.

While this recognition is welcome, the latest Supreme Court judgement doesn't remotely meet the requirements of justice. Most victims will be paid paltry sums like Rs.25,000 (US$625 in 2004) for a lifetime of suffering and disability. The worst-affected people, disabled by grave, irreversible health damage, will be denied even the minimum needed for medical treatment.

The roughly 30,000 victims who have sustained extremely severe damage, and deserve upwards of Rs.2 lakhs in relief, will suffer a dilution of that sum.

The Rs.1,500 crores will be split among 5.5 lakhs in the 36 affected municipal wards of Bhopal. The sum is what remains of the US$470 million paid to the government by UCC, but withheld from the victims.

Only half the original amount was disbursed earlier.

The sum's size is explained by the threefold depreciation of the rupee vis-à-vis the dollar and accumulated interest. The additional 'compensation,' then, only makes up for devaluation.

The US$470 million represents one of the world's cheapest settlements of any toxics-exposure suit. It barely equals double the amount of Union Carbide's insurance cover.

Had a much less terrible accident occurred in the West, UCC would have been immediately bankrupted. Its directors would have been jailed. They'd face more severe punishment than, say, Enron's Kenneth Lay.

If UCC's victims have received some recompense, it's not because of the courts or governments, not because 'the system works.' The reason is their own heroic effort. Their struggle has been valiant.

Their strong collective experience has empowered them and helped them recover their dignity and rise above victimhood.

Since 1984, I have personally witnessed how broken widows, children forced to become heads of their families at age nine and all-but-crippled daily wage labourers, have turned into strong human beings and great activists.

This self-empowerment through struggle is the greatest achievement of the Bhopalis and their transformation from victims to victors.

Bhopal has experienced not one tragedy, but three.

The first was the 1984 accident caused by flawed plant design and negligence.

The second was the unjust out-of-court settlement with Carbide, after the victims were deprived of independent legal representation.

The third disaster was the way their claims were settled. Ninety-five percent received a disgraceful Rs. 15,000 for a lifetime of suffering. Callous doctors and corrupt bureaucrats further humiliated them.

Families of the dead got just Rs.1 lakh: even rail accident victims get more. Putting such a low value on human life speaks poorly of Indian society itself.

Institution after institution let down the Bhopalis. The government took over the litigation and ruined it. The US courts made matters worse. Indian courts couldn't handle the case on the basis of torts (civil wrongs, caused by negligence) – because we had no tort law.

The CBI failed to act on an arrest warrant for UCC chairman Warren Anderson, issued in 1992!

The Supreme Court itself let the victims down by approving the US$470-million settlement in return for extinguishing Carbide's civil and criminal liability.

Two years later, under the V.P. Singh government, criminal liability was restored. But the Indian embassy in Washington still failed to serve the warrant on Anderson because, it claimed, he couldn't be located. This, when Greenpeace published his address!

The Centre put the Madhya Pradesh government in charge of relief despite its appalling record of callousness, incompetence and corruption.

The Indian Council of Medical Research failed to suggest a rational line of treatment for the victims' disorders, including immune system damage.

Bhopal's elite has been hostile to the gas-affected. BJP leaders Uma Bharati and Babulal Gaur have demanded that the victims should share the compensation with the well-off unaffected wards!

In 2002, another challenge emerged: collusion between the Indian and United States governments to dilute criminal charges filed against Carbide's officials.

The Ministry of External Affairs asked the CBI to amend the charges against Anderson from culpable homicide not amounting to murder (304-TI of IPC) to 'a rash and negligent act' (304A), which carries only two years' imprisonment.

The Bhopal victims – killed or scarred for life for no fault of theirs – were again asked to sacrifice their rights for Indo-US 'strategic partnership,' 'investor confidence,' 'market sentiment,' etc.

The Bhopalis beat back the challenge. They are clear: they might never receive adequate compensation. But the world shouldn't forget that a multinational corporation which was abysmally negligent in plant design and operation, caused their grievous suffering.

Its officials must not be let off. The victims must know who heaped injury, injustice, and ignominy upon them.

That struggle for full justice still lies ahead. But what the victims have achieved is significant. They never allowed themselves to be browbeaten by the worst adversity. Their spirit is indomitable.

Their organizations have succeeded where most NGOs fail: preserving unity. The latest litigation was initiated by 36 individuals, each representing a gas-affected ward, cutting across different organisations.

The Bhopalis' struggle hasn't ended. But it will continue to inspire millions, energise many struggles against tyranny – and remind us of how far we have to go to create a safer world.

**Praful Bidwai is an eminent Indian columnist.*

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Legal Letdown

Indira Jaising

ALMOST TEN YEARS after the disaster in Bhopal on 2–3 December 1984, the numberless, unidentified and ever increasing victims of the tragedy have been forgotten – most certainly by our 'legal system'. The world's most spectacular law suit has vanished without a trace, leaving no legal legacy which could enrich the jurisprudence of this country.

In a manner of speaking, given the nature of the judicial process, victims of personal injury cannot hope to be adequately compensated in monetary terms: life and dignity are not negotiable in monetary terms. Yet, the law knows of no other way in which to compensate harm. But what they can hope to do is to leave behind a legacy for future generations, making the world a better place to live in. They can hope to leave behind a history of struggle for justice resulting in vindication of their point of view which will help prevent similar disasters in future. They can hope to satisfy their psychological yearning for justice and help to reshape and remold the reality of their situation in a manner which is just and equitable.

The victims of Bhopal have been denied this opportunity. Their sacrifice has been in vain.

It is necessary to document and analyze the legal history of the Bhopal litigation, if only to document our failures. Perhaps, future generations may still learn from them. This article does not set out to

be an exercise in such documentation, but rather is an attempt to mark the major milestones on the road to legal disaster.

The escape of 40 tons of deadly toxic gases from the factory of Union Carbide India Ltd (UCIL) on the night of 2–3 December 1984 has been mistakenly called an accident. It was an event programmed to happen. Even if one does not believe in the conspiracy theory, the fact that the objective situation was laid out for the disaster cannot be ignored. The choice of technology, the trade secrecy surrounding the manufacture of the chemical MIC, the storage of such large quantities of the deadly chemical in unsafe conditions, the location of the plant in the heart of human settlements, and the refusal to heed to warning from previous accidents, all ensured that the disaster of December 1984 would take place. It was only a question of time.

Union Carbide started producing pesticides in India in 1969, at a time when India thought it needed pesticides, to consummate its 'Green Revolution'. Along with pesticides it imported the death and disaster of the Bhopal tragedy. In fact, Union Carbide advertisements of that period depict lush green fields with the slogan: 'We stand for progress.' By December 1984, far from showing progress, Union Carbide saw its profits declining in the Indian pesticide market and found its capacity underutilized. Plans were afoot to sell the plant. The plant was neglected and rundown – already a drain on the multinational's resources. Bhopal-based journalist, Raj Kumar Keshwani saw the writing on the wall. In a series of three articles published in *Saptahik Report* written more than two years before the disaster, he warned 'Save! Please save the city,' 'Bhopal in the mouth of a volcano,' and, 'If you don't understand, you will be wiped out.' Nobody took note. Perhaps the reason for this was that the people at risk were the poor and homeless slum dwellers who lived in the vicinity of UCIL, not the bureaucrats and the Chief Minister. Moreover, Bhopal was something of a company town – almost anybody who mattered in decision-making was beholden to UCIL.

As the world woke to the news of the disaster, everyone expected answers from UCIL: how did it happen, why did it happen and what happened. There was no response to these questions from UCIL or Union Carbide. Instead of confirming the toxic nature of MIC, company officials maintained that the gas was not poisonous and that it was 'just like tear gas.' This, while more than 2,500 people died in the streets within hours of the leak. No efforts were made by Union Car-

bide to rush medical aid or prescribe a line of treatment. Although Dr Bipin Awasi, Medical Director and Toxicologist of the Union Carbide plant in the US suggested the possibility of cyanide poisoning, his statement was promptly retracted the moment it was realized that such an admission could have far reaching consequences in the legal liability of Union Carbide to compensate the victims. The possible use of sodium thiosulphate (NaTS) as an antidote to cyanide poisoning was aborted and actively destroyed by Union Carbide. It took months before victim groups, through Dr Nishith Vora, could approach the Supreme Court and obtain a direction that the Government of India (GoI) should make NaTS available to the victims free of charge. To admit that NaTS could give symptomatic relief would be to admit that the toxic gases has crossed the blood-lung barrier – causing mutagenic and teratogenic effects.

This was Union Carbide's first victory: successfully confusing the medical community on the nature of the toxic gases and the extent of injury. On the extent of injury would depend the amount of compensation they would be ultimately liable to pay. Round one was won by Union Carbide even before the legal battle began. By the time the ICMR suggested a course of NaTS injections, it was too late to tell whether the drug would have helped alleviate the symptoms.

The State of Madhya Pradesh responded to the disaster by setting up a Commission of Enquiry into the cause of disaster. The people of Bhopal alleged that Arjun Singh, the then Chief Minister, fled Bhopal in a helicopter on receiving news of the leak to save his own life. So strong was this belief that it was included as a term of reference in the enquiry. What the truth really was we shall never know, as the Commission was wound up before it could complete its work. Union Carbide refused to participate in the enquiry. UCIL, however, did represent itself. An application was made to the Commission to direct UCIL to produce all data relating to MIC and its toxic effects. UCIL *refused* to disclose the data claiming *trade secrecy.* Till this day, the data has not been made public in any Court of Law. Nobody took the work of the Commission seriously and its term was not extended, presumably on the ground that by then suits were filed against Union Carbide in the USA claiming compensation and the Commission was therefore no longer necessary. This was yet another victory for Union Carbide and UCIL as they were relieved of the obligation to be answerable for the cause of the gas leak. It left them legally free to propound and maintain the fanciful story that it was an act of sabo-

tage – without having to prove this scandalous allegation in any Court of Law.

Even while the bodies of the victims were still warm, American lawyers, seeing this as an opportunity to fight the world's biggest law suit flew down to Bhopal in a desperate attempt to sign them up as clients. Armed with thumb impressions on powers of attorney, they flew back and filed several suits in different District Courts in the US claiming billion of dollars as compensation. Between them, they claimed to represent 5,00,000 claimants in about 1,86,000 actions. Clearly, the situation was undesirable as none of these lawyers had any legal strategy to offer nor could they deal with the sheer volumes of claims. Moreover, there was a clear and present danger of the American lawyers entering into deals with Union Carbide, based on which they claim 33% as contingency fees.

In March 1985, GoI, passed the Bhopal Gas Leak Disaster (Processing of Claims) Act. The Act was intended to serve several purposes. First, it was intended to wrest control of the proposed litigation from the hands of the American lawyers for it gave to GoI, the statutory right to represent all victims in or *outside* India. This part of the Act was intended to authorize the GoI to bring an action in the US. It was a recognition of the fact that the victims themselves were incapable of bringing such an action and that the American lawyers would not necessarily represent their clients. Events were to show that this assumption was justified as all US lawyers were only too keen to settle the claims: the sooner they settled, the sooner they could claim their 33% of fees an enormous amount if the suits had been settled for US$350 million.

Secondly, the Act was intended to be a measure of public support to disadvantaged victims who were in obvious need of an agency to vindicate their claim against a multinational corporation. Towards this end, the GoI constituted itself as the sole representative of the victims, with full authority to litigate on their behalf and to *settle* their claims. The Act empowered the government to frame a scheme for registering and scrutinizing claims of the victims. Such a scheme was in fact framed.

The Act was an unprecedented response to an unprecedented disaster. Indian law contained no provisions for class actions in personal injury cases and Indian Courts would have been incapable of adjudicating 5,00,000 individual cases in the absence of such a law. The Bhopal Act consolidated the claims and constituted the victims

into a class: all those who had a claim 'arising out of or connected with the disaster' fell into the class. A claimant was a person who suffered injury *as a result* of the disaster. This, in a sense, was begging the question. The question, who suffered an injury as a result of the disaster, has remained unanswered till today. Be that as it may, the consolidation of the claims was an essential step in the direction of seeking justice.

In one major respect, however, the Act went hopelessly wrong: it almost completely disempowered the victims from participating in the adjudication process. By any reckoning, such an Act would be considered unconstitutional, as it denied to the victims any form of control over their own battered lives. While the government showed great sensitivity in providing the victims with the much needed resource in the form of State intervention on their behalf, this did not necessarily have to be to the exclusion of the victims themselves.

As history was to show, this exclusion of the victims was to have fatal consequences for the litigation. It is not without significance that Union Carbide challenged every single move of the GoI in the litigation except this one thing: they did not seriously challenge the power of the government to represent the victims. Perhaps even as far back as in 1985, Union Carbide was confident of striking a deal with the GoI, something it could not have done with individual victims or lawyers, without having to stand scrutiny on the fairness of the deal in a Court of Law. A settlement with the GoI, on the other hand, would have the authority of the statute and would not require to be justified as fair in a Court of Law. A presumption of fairness would operate in its favor as a settlement negotiated between two equally placed parties negotiating at arms length. Union Carbide policy in this respect was farsighted.

Armed with the Act, the GoI, in April 1985 joined the litigation in the USA. The judicial panel on multidistrict litigation had in January 1985 ruled that the cases would be heard by Judge J.F. Keenan in the Southern District of New York. The GoI retained the services of Robins, Kaplain, Muller and Ciresi. This decision too was of doubtful validity as that firm disclosed that it had represented Union Carbide in the past. Presumably, the decision was taken by A.K. Sen who at that time was India's Law Minister – a widely travelled man, who has his own son practising abroad, and himself a leading lawyer who could not have been unaware of the suspicion that the decision could cause in the minds of the victims. Judge Keenan appointed a steering

committee of three lawyers – F. Lee Baily, Stanly Chesly representing the private plaintiffs, and Michael Ciresi representing India. Ciresi was nominated in recognition of India's right of representation under the Bhopal Act, as it was by now obvious that the private litigators could not, on their own, bring the litigation to a successful conclusion. India was to have a decisive say in the course of the litigation.

At this stage, Union Carbide made its most important legal move. In July 1985, it moved an application to dismiss the suit on grounds of 'forum non conveniens.' The motion had the potential of seeing the suit dismissed in the US. But the very making of the application was premised on the argument that Union Carbide would be willing to face proceedings in India, which then would be the next and only available forum in which it could be sued. At that stage, the GoI had the option to state that it was ready to bring an action in India, if Union Carbide was willing to submit to the jurisdiction of the Indian Courts. It chose not to and to insist that the US was a more convenient forum, chosen by them as plaintiffs. The issue was squarely joined and would have to be decided by Judge Keenan.

The plaintiff's lawyers sought to emphasize the fact that the disaster was vitally connected with the US inasmuch as the defective plant was designed in the US that ill decisions regarding safety was taken by Union Carbide and that Union Carbide had complete control over UCIL. They also argued that the disaster should be of great concern to the citizens of the US as it was an American corporation that was responsible for exporting toxic material to the Third World, indulging in double standards and was responsible for the disaster: that the US ought to have had an interest in ensuring that the US multinational corporations are disciplined in their relationship with Third World countries; and that obviously unequal and exploitative relationships would not be tolerated by the law. Of all the arguments for deciding the case in the US this was the strongest.

There were other arguments which do no credit to a sovereign nation's government. Reliance was placed on an affidavit filed by Mark Galanter, considered an authority on Indian Law, to argue that Indian Law on mass Torts was underdeveloped, that the Indian Courts were overburdened to the extent that the delays were unbearable, that the Indian Bar was underdeveloped. While much of this may be true, much the same can be said of the system in the US. Both US law and Indian law of Torts draw sustenance from Common Law, princi-

ples of liability in both are the same. It is worth recalling, as regards US Torts law that the Agent Orange litigation on behalf of the Vietnam Veterans took ten years to settle at amounts that the victims found too low.

In the Bhopal case proceedings, Union Carbide pulled off something of a coup. They enlisted the services of no less a person than N.A. Palkivala, former Ambassador to the US and a highly rated senior lawyer. He filed an affidavit in support of Union Carbide's claim to have the suits tried in India. In his affidavit he said: 'I am constrained to say that it is a gratuitous denigration to call the Indian legal system deficient or inadequate.' He rose in support of the legal profession and the Judiciary calling both creative. Being futuristic, he said, 'the Bhopal litigation represents an opportunity for the further development of Torts Law in India...' Union Carbide, in fact cited Justice P.N. Bhagwati's decision in the Shriram case, in which he held that an enterprise engaged in ultra-hazardous activity of an inherently dangerous nature owes an 'absolute and non-delegable duty to the community,' as an example of such creativity.

Only a few years, later when the suit was re-filed in India, Union Carbide through its counsel Fali Nariman was to criticize this decision as politically motivated! But for now, history must record that the same Mr. N.A. Palkivala, years later, was to file an affidavit, once again in a court in New York, that a suit filed by Standard Chartered Bank against Citibank in New York should be heard and decided in New York as Indian Courts, given the delays, would be incapable of dealing with the suit. It is not the underdevelopment of the Indian Bar that was the undoing of the Bhopal victims, but rather the underhand methods used by its leading lights.

For the time being, relying on the affidavits filed by N.A. Palkiwala and J.B. Dadachanji, Judge Keenan decided, in May 1986, that the case should be heard in India. He dismissed the suits on condition that Union Carbide consent and submit to the jurisdiction of the Indian Courts, agree to satisfy any judgment of the Indian Courts on condition that it satisfied minimal due process and be subject to discovery under US Federal Rules. Social activists loudly condemned the judgment. Yet the judgment was predictable. It was not legal, but extra-legal considerations that compelled Judge Keenan to dismiss the suit. If the suit had been tried in the US, its courts would have been compelled to confront the question of double standards not only in threshold levels of safety but also in the matter of compensation

levels. For an Indian Court to award lower levels of compensation might look reasonable, for an American Court to do so, based on the lower standard of living in the Third World would have come across as being blatantly discriminatory. Judge Keenan accepted the evidence of Union Carbide and noted that the Indian Courts had often been creative in enforcing fundamental rights, that delays could be dealt with by expediting the litigation. He held, and rightly so, that the basic groundwork of Torts Law was Common Law and judges in India would undoubtedly look at British cases and developments in the law elsewhere. He held that the major portion of the evidence was in India, the plant was in India and witnesses were more readily available in India.

In all this, perhaps he was justified. But the most important reasons that obviously weighed with him was his understanding that the US did not have a strong interest in the case. Thus, he declined to accept the argument that keeping the case in the US would compel US multinationals to accept responsibility for the wrongs of their subsidiaries overseas, accept responsibility for double standards and be a deterrent against future accidents.

The refusal to accept this argument is based on a policy decision that it is 'not my problem.' Hence the decision was purely political. Ironically, he concluded that keeping the case in the US would be an example of imperialism as India would be denied the opportunity to enforce its own regulatory standards. In effect, though not so stated, he held that Union Carbide ought not to be held responsible for the wrongful acts of its subsidiaries in India.

This is not the only regrettable part of his judgment. During the forum hearing, Union Carbide and the private plaintiffs' lawyers continued discussions on settlement. Union Carbide made an offer of US$350 million. The private plaintiffs' US lawyers agreed and demanded a fairness hearing. The GoI refused to accept the offer most emphatically. In view of the government's refusal, the motion for fairness hearing was declined as no settlement could be made effective without the cooperation of the government.

Four years later, in February 1989, that very same government was to agree to US$470 million, that is just about the same amount with interest for the intervening period. Why this was agreed to will forever remain a mystery as no written record exists of the negotiations or the basis on which the agreement was arrived at. But if the

government thought the sum was fair, what prevented it from agreeing to US$350 million in 1985, sparing the victims the agony of waiting? In 1985, it was perhaps convenient to exhibit a militant stance and convey the impression that everything was being done in the interests of the victims. The memory of the disaster was fresh in the minds of Indian people.

The GoI decided not to appeal against Judge Keenan's decision. The private plaintiffs' lawyers appealed. Union Carbide also appealed the conditions imposed by Judge Keenan. They argued that Indian Courts could not be trusted to observe due process and therefore they should not be compelled to satisfy a judgment of an Indian Court.

Thus the foundation for disobeying the judgment of the Indian Courts was laid. The Court of Appeal upheld the decision in January 1987, but modified the condition. It struck down the condition that Union Carbide agree to satisfy judgment provided it complied with 'minimal' due process on the ground that this might suggest a lower standard that required by US Law. It also deleted the condition that Union Carbide comply with discovery rules on the ground that there was no reciprocity.

In a sense, the outcome of the litigation was predictable. India could not and should not have attempted to persuade the court that its own legal system and courts were inadequate; the failure of the suit in the US reflects a failure of the chosen strategy. Both in terms of its legal system, the independence of its Judiciary, its strict compliance with due process an its substantive laws, it compares with any other system in the developed world. This is not to say that the system is without its drawbacks, but the limitations of the system in dealing with toxic torts are common to the US legal system. The limitations are endemic to the Law of Torts which is hopelessly inadequate to deal with environmental wrongs which affect a community as a whole. An injury produced by ultra-hazardous activity is literally invisible; the Law too gives it low visibility. The problem with Judge Keenan's judgment was not that it conceded paramountcy to the Indian Courts but that it sanctioned double standards for American multinationals refusing to acknowledge that it was the business of the US to discipline its own industry in its transnational operations. The judgment was a charter to American business to export hazards to the Third World countries without danger of being made accountable in the source country.

In September 1986, the GoI filed a suit in the District Court at Bhopal. Obviously, the possibility of setting up special courts or filing the suit in the High Court was ruled out in order to avoid allegations of 'due process' denial. Judge Patel, on the application of the GoI, passed an order restraining Union Carbide from disposing off its assets worldwide. This order was ultimately modified on an undertaking by Union Carbide to keep US$3 billion in assets to satisfy possible judgment.

India had claimed US$3.3 billion in damages. India's suit was against Union Carbide-UCIL was not made party to the suit for reasons which are difficult to understand. India's claim that Union Carbide was liable as it was in control of the Bhopal operation, did not rule out the possibility of suing as well. Union Carbide was sought to be held liable in Tort for negligence, strict liability and absolute liability. Union Carbide, it said, had designed a faulty plant, that it was aware of the ultra-hazardous nature of MIC, yet failed to disclose it, and failed to maintain safety standards. The obvious response of Union Carbide was to disclaim all responsibility for the operations of UCIL.

The GoI plaint alleged that Union Carbide had permitted the storage of dangerously large quantities of MIC, that it had no emergency relief system, that it was aware of the dangerous nature of the material stored and that it did not share this information with the government. Union Carbide relied on an agreement with UCIL under which Union Carbide was absolved of all responsibility for personal injury. India, naturally, argued that the agreement was not binding on it. In addition to basing its claim on negligence and strict liability, the Union of India pleaded that Union Carbide had 'an absolute and non-delegable duty to ensure that the said hazardous plant did not cause any danger or damage to the people and the state by the operation of the ultra-hazardous and dangerous activity...' Unfortunately, this theory of liability never came to be tested or accepted in view of the February 1989 settlement.

By far the most important challenge posed by the litigation was to hold Union Carbide liable for the disaster caused by escape of toxic gas from the Indian company. It is this factor alone that could have justified the filing of the suit in the US and its retention there. The Third World had an interest in ensuring that multinationals are not permitted to escape legal liability by the device of working through subsidiaries. Given that the suit was transferred to India, this issue

would have to be litigated in the Indian suit. India also invoked the theory of 'multinational enterprise liability.'

Union Carbide denied that the plant was defective. It distanced itself from UCIL stating that the plant was managed and controlled only by Indians and was subject to India's regulatory regime. It maintained that the disaster was due to an act of sabotage but refused to disclose the name of the saboteur. It filed a counter-claim against the Union of India and the State of Madhya Pradesh on the ground that both knew about the toxic properties of MIC, yet took no steps to ensure that there were no human settlements in the area or to set up early warning and emergency procedures. The counter-claim was intended only to disown liability, yet, from the moment the counter-claim was made, it did put the GoI in a clear position of conflict with the victims it was representing. The interests of the victims were now clearly unsafe in the hands of the GoI as it would be involved in lengthy legal arguments trying to disprove its own liability. Yet the GoI continued to be the sole representative of the victims, a position which ultimately caused it to compromise its position in a settlement which all – except Union Carbide and the courts – describe as a sell-out.

As mentioned earlier, in December 1986, Justice P.N. Bhagwati, while deciding the Shriram Case, involving an oleum gas leak, decided that enterprises engaged in ultra-hazardous activities owe an absolute and non-delegable duty to the community to ensure that no harm is done. He also held that the award of damages must be deterrent and damages must be related to the capacity of the enterprise to pay. Union Carbide's lawyer, Fali Nariman, during the course of his arguments in the Supreme Court openly called into question Justice Bhagwati's motives in delivering the judgment and alleged that he wrote the judgment in order to preempt a judgment in the Bhopal case. Judges of the Supreme Court not only tolerated this devastating attack, but some actually tended to agree with him. In subsequent hearings, some judges have been openly heard to say that they differ from the Shriram judgment, in particular on the measure of damages. The Shriram judgment was hailed by social activists as a great victory which had the potential of bringing the Bhopal litigation to a successful conclusion. Its promise however has remained unfulfilled – not only in Bhopal, but even in other cases. Judges of the Supreme Court have simply refused to take it seriously, demonstrating their liability to take on the problem of corporate misconduct seriously.

The Shriram judgment played no role in the final solution of the Bhopal case, but it was cornerstone of the interim relief strategy.

Justice Deo before whom the suit was pending in Bhopal made repeated efforts to get the parties to agree to an out of court settlement. It was rumored that a figure between US$500–650 million was agreed too. Again, the negotiations were conducted in secret and the victim groups protested against any proposed settlement. By end 1987, the government had not even estimated or assessed the number of victims, much less the nature of the injury. How then could it agree on a figure for settlement? The *Zahreeli Gas Kand Sangharsh Morcha* (ZGKSM) and the *Jan Swasthya Kendra* (JSK) made an application for interim relief as, by that time, the government had neither granted any worthwhile relief to the victims nor programmed health services. It is worth noting that the government itself made no application for interim relief which is perhaps the reason why its defence of the High Court order granting interim relief in the Supreme Court was halfhearted.

In December 1987, Judge Deo awards US$270 million as interim compensation in exercise of inherent jurisdiction and powers. Indian law contains no specific provision empowering judges to grant interim damages in personal injury cases. Naturally, Union Carbide appealed to the High Court characterizing the judgment as perverse and making it clear that it would not pay up. It made an application that Judge Deo 'recuse' himself from the case as he had prejudged the issue and was biased. Judge Deo refused to recuse himself. The application was a transparent attempt to lay the foundation for a 'due process' objection in the US Courts. The GoI took contempt of court action against Fali Nariman, Union Carbide counsel and chief architect of its strategy. The February 1989 settlement records that action for contempt against Union Carbide counsel is dropped.

In April 1988, Justice S.K. Seth of the High Court directed Union Carbide to pay interim damages of US$170 million (Rs.250 crore). The Shriram case played a major role in Justice Seth's reasoning. Accepting the theory of absolute liability, he, in effect held that Union Carbide was *prima facie* liable to compensate the victims. He held Union Carbide liable on the ground that it had major control over UCIL. Once he found Union Carbide *prima facie* liable, interim compensation could be paid on grounds of 'Justice, Equity and Good Conscience.' He then looked at statutory developments in UK which permitted payment of interim compensation and held that principles

analogous of those provisions would apply and directed interim payment to be made. The question still remained: how much? And no figures of the actual extent of injury existed. Admittedly, no estimate of the number of victims had been yet made. In fact, admittedly, no such estimates were made even in February, 1989 when the case came to be finally settled. Even so, Justice Seth went by a figure of 2,500 dead and 30,000 seriously injured mentioned by Union of India. Estimating the total that would be payable on a final hearing, he ordered payment of half, amounting to US$170 million.

From then on, the scene of action was to shift to the Supreme Court and stay there. Union Carbide filed an appeal against the judgment. They neither sought a stay of the judgment nor was any stay granted. They simply refused to pay in utter defiance of the High Court order. Union Carbide officials in US issued statements saying that they would refuse to pay and the Indian Courts can do nothing about it. And yet the Indian Supreme Court heard Union Carbide appeals, consciously allowing its own authority to be undermined by a multinational. Would the Supreme Court have heard any other contemner with such patience and respect or was such treatment reserved only for a multinational giant?

The real letdown of the victims of the tragedy took place in the Supreme Court at this very stage. What were they afraid of? The enforceability of an Indian judgment in the US? But why did the Supreme Court have so little confidence in its own 'due process' standards? The course of the litigation in the Supreme Court reflects massive lack of confidence in its own adjudicatory system.

Union Carbide characterized Justice Seth's order as perverse. They condemned the Shriram judgment relied on by Justice Seth as motivated by the Bhopal disaster and being written for it. They questioned the validity of absolute liability theory as being part of Indian law. The Indian Supreme Court was obviously overwhelmed by the intensity of the Union Carbide attack on the Indian legal system. The appeal would have forced them to decide on three very vital issues: one, do the courts have the power to grant interim relief in personal injury cases, an issue which arose for determination for the first time; two, was Shriram good law; and last, but not in the least, could Union Carbide be held liable at all for the disaster which occurred through the Indian subsidiary, UCIL. The Supreme Court was presented with a unique accelerated opportunity to decide the issues. The GoI on the other hand, could have guaranteed the repayment of the amount of

interim relief awarded on being directed to do so. This could have got over a lot of the 'due process' objections that Union Carbide could possibly raise in an American Court at the stage of enforcement of the interim judgment. Neither was done, weakening the case of the victims. The Supreme Court neither called upon Union Carbide to comply with the interim order nor did the GoI apply to hold Union Carbide liable for contempt of court, indicating the common lack of confidence that both shared in their own-respective abilities.

While denying liability in one breath, Union Carbide, at every stage – first before Judge Keenan, at the appeal stage, then in the District Court in Bhopal and finally in the Supreme Court – persisted in trying to arrive at a full and final settlement. Obviously negotiations were held with the Union of India as the sole representative of the victim. The case was being heard in the Supreme Court from day to day. It was heard on the morning of 14 February 1989. Court adjourned at 1 p.m. to reconvene at 2 p.m.. The morning session had seen acrimonious debate over the legal issues between Fali Nariman representing Union Carbide and K. Parasaran, the then Attorney General representing Union of India. When the court reconvened, Chief Justice R.S. Pathak who was presiding over the Bench announced that a set, full and final settlement had been arrived at. There was no talk of settlement in open court or in any other open forum prior to 14 February 1989. Union Carbide agreed to pay US$470 million in full and final settlement of its civil and criminal liability.

It needs recalling that in mid 1985, the Union of India had refused to settle at US$350 million, while in 1989 it hailed a settlement at US$470 million as a great success. The settlement obviously had the green signal from the then Prime Minister, the late Rajiv Gandhi. Union Carbide's triumph was complete, they had succeeded in achieving their hidden agenda at the 'forum non conveniens' stage – to have the case in India because damages awarded in India would be low as life in India was cheap. If, as they had claimed all along that they had nothing to do with UCIL, why did they agree to pay? Obviously, the only question all along was: what's the bottom line – how many dollars would they have to pay. On February 15, 1989, yet another memorandum of settlement was filed in court recording the terms of the settlement.

There was unanimous condemnation of the settlement by victim groups and by concerned citizens. Why did the GoI settle at US$450 million? Why did it agree to give immunity from criminal liability?

And most importantly, why did the Supreme Court evade a decision on the momentous legal issues that arose for consideration?

The only explanation offered was the urgency to provide immediate relief. This was clearly the weakest possible reason: it was the duty of the GoI, both under the Constitution and under the Bhopal Act to provide 'immediate relief'. Indeed, the GoI had claimed all along that it was providing such relief in terms of medical benefits, nutrition and monetary relief. This was one case that could have stood the hurdle of delays as the entire litigation on behalf of the victims was being underwritten by the GoI. Victim groups announced that they were going to challenge the settlement. Union Carbide's response was prompt. In order to evade the jurisdiction of the Indian courts, they quickly transferred the money from the US to India. Once that was done, there was no need to submit to the jurisdiction of the Indian Courts any more as the condition of Judge Keenan's judgment would then have been satisfied. Fortunately, faced with the challenge to the settlement, the Court directed Union Carbide to continue to submit to the jurisdiction of the Indian Courts, until the challenge to the validity of the settlement was decided.

The settlement was arrived at through an extraordinary procedure – the entire suit was transferred from the District Court to the Supreme Court. There is no specific provision of law which permits the Supreme Court to transfer a suit to itself. This was done anticipating a challenge and in order to preempt such a challenge. The manner in which the settlement was arrived at indicates that all parties, Union Carbide and Union of India and the court were highly conscious of the fact that the settlement would meet with resistance and be challenged – and devised a procedure to preempt the challenge. All parties including the court knew that the victims had not been consulted before the settlement was signed – a more gross violation of 'due process' would be difficult to find in the annals of Indian legal history. In its anxiety to ensure due process to Union Carbide, the Supreme Court of India was willing to sacrifice the 'due process' rights to the victims.

By any test, the settlement on this ground alone, would not stand the test of validity when challenged by the victims in a US court. And yet, even when specifically challenged on this ground, it was upheld by the Supreme Court. If Union Carbide and the GoI had arrived at a settlement, nothing prevented the Supreme Court from directing the parties to announce the settlement publicly and file it in the District

Court at Bhopal so that court could hold a fairness hearing. Not only did the Supreme Court not satisfy itself on the fairness of the settlement, it did not allow any other court to do so by transferring the suit to itself. By the settlement, criminal proceedings were also quashed and Union Carbide was granted immunity from future civil and criminal liability.

By consent, UCIL which was consciously not sued, was added as a party to the settlement with the sole intention of giving UCIL and its officers the benefit of immunity from criminal proceedings. The settlement also provided that the proceedings against counsel for Union Carbide would be dropped. The sole beneficiary of this term of settlement was Fali Nariman against whom contempt proceedings were pending. Faced with national criticism, the court felt compelled to *suo moto* justify the settlement as fair. On 4 May 1989, the court announced its reasons for accepting settlement. The order dated 4 May 1989, is signed by all the five judges who heard the case. Of the five, Justice M.N. Venkatachaliah, who later became Chief Justice, is commonly believed to have written the order.

After the settlement, the debate was sought to be channelized as to settle or not to settle at all. But this was a fake debate. The debate over the mid February 1989 orders raised far reaching questions about the manner and method of functioning of the Supreme Court and called into question its ability to do justice. The question was not whether to settle but how to settle and on what terms. The role of the Court was to ensure that the settlement was not collusive, that it was fair, that it was not opposed to public policy or opposed to any provision of law, and that it was acceptable to the vast majority of the victims. It failed in each of those roles. That Union Carbide succeeded in achieving its game plan is thanks to the GoI and the Indian Supreme Court. Without the active assistance of both, it would not have succeeded.

It is pointless therefore to focus attention only on the role of multinationals in Third World countries. One must focus instead on the relationship between the multinationals and governments in Third World Countries and their legal systems. While the relationship between the victims and the multinationals is more than unequal, the relationship between the multinational company and the GoI was not and need not have been one of subservience of the latter to the former. The failure of the Bhopal litigation is primarily the failure of the Indian legal system to hold the multinational accountable for its

actions. After the settlement, in a real giveaway, Attorney General, K. Parasaran started talking about the 'weaknesses in our case'.

In its 4 May 1989 order, the court justified the amount as being based on the number of deaths at 2,660 and injuries at 30,000 to 40,000. But what faith can one have in an *ex-post-facto* justification? Why were these figures not part of the settlement? Where did these figures come from? The medical exercise was nowhere near completion so how could the court have accepted these figures? Was it not the duty of the court to have asked the government to justify the figures in view of the fact that about 5,00,000 claims had been lodged? What was the nature of their injury? What was the measure of damages? All these questions have remained unanswered till today several years after the disaster.

The court, in its 4 May order, promised that 'all those who invoked the corrective process in accordance with laws shall be heard...' What exactly was being promised? A review? If so, what was the scope of the review? Was it confined to demonstrating 'errors of law apparent on the face of the record'? If so, where was the record as it stood prior to 14–15 February 1989 from which the errors could be demonstrated? There was none. Or was it open to the victims to show that the settlement figures were hopelessly inadequate? If so, why was this burden shifted to them, that too after the settlement had already been entered into and passionately defended by both Union Carbide and GoI? The victims were pushed into a situation of fighting an alliance between a multinational and a Third World government against them.

But there was yet another hurdle to the settlement, the pending challenge to the Act itself. Realizing that the settlement could not have been validly effected until the challenge to the Act was decided, the court fixed 9 March 1989 for a hearing on a group of petitions challenging the Act. The court referred the hearing to a different bench of five judges. The hearing was limited by an order of reference to the question of the validity of the Act – and nothing more. And yet, the judgment delivered in December 1989 goes into the question of the validity of the settlement itself! If the parties were precluded from going into the validity of the settlement, how then could the court decide an issue never referred to it, as that issue was to be taken up for hearing by the same bench that heard the Union Carbide appeals and sanctioned the settlement.

This can only be characterized as an act of institutional judicial indiscipline.

The late Justice Sabyasachi Mukerjee wrote the main judgment. He upheld the validity of the Act on the ground that the government was acting in a *parens patria* capacity. He acknowledged that the victims had not been heard before the settlement. He held that they did have a right to be heard, but he refused to strike down the Act on the ground that it violated 'due process' or the right to be heard. Many have questioned the strategy of challenging the Act as unconstitutional. Yet this issue is central to an understanding of what went wrong in the Bhopal Case. The monopolizing and appropriation of the disaster by the government is what lead to the sellout and the Act was the mechanism through which it was monopolized. Those who chose to support the Act unconditionally were unable to foresee what the surrender of power meant.

The settlement was a logical outcome of the Act. To attack the settlement but not the Act is to indulge in acts of self deception and shadow-boxing. At all material times, all significant developments in the case were taking place outside the court room; the law provided an alienated language of discourse unrelated to the social and political events. Those who challenged the Act succeeded in their contention that the victims had a right to be heard before the settlement could be entered into. This is how the court put it: 'Therefore, in our opinion, in the background of this question, we must hold that Section 4 means and entails that before entering into any settlement affecting the rights and claims of the victims some kind of notice or information should be given to the victims...'; 'The Act would be bad if not construed in the light that notice before any settlement under Section 4 of the Act was required to be given.'

The valiant champions of the valiant victims ought not to have surrendered this most valuable of human rights – the right to be heard. Justice for the victims was not only to be measured in terms of dollars, but also as a fight over values, a fight to assert their dignity. The entire Act is premised on the assumption that the victims' perception of their own injury is irrelevant. It denied them any autonomy in the decision-making process. For a State to support and take public responsibility for a disaster is one thing, to disempower the victim is another. During the course of the hearing, Judge Mukerjee remarked that the Act had exhausted itself, as the suit had been filed. He had to be reminded that the Act would remain potent for generations to come

as all victims and future generations of victims would have to satisfy their claims only under, through and on the terms of the Act. In view of the limited nature of the reference, having held that the Act required the victims to be heard, there was no need for the court to go into the further question of what the impact of not hearing the victims on the settlement was. And yet the court did exactly that.

Justice Mukerjee later was a member of the Bench that was hearing the challenge to the settlement. He was heard to remark that we went into the question of settlement because, in his view, the Bench that referred the case on the validity could not have made a limited reference. But if that was his belief, he was bound to disclose it to the parties while hearing the validity of the Act rather than go into the question of the settlement. What he did was to almost preempt a decision on the validity of the settlement. He held that the failure to give a hearing did not invalidate the settlement, that the victims had no right to disclosure of material on which the settlement was based and that the victims could be heard in the review applications anyway.

To say the least, the judgment does not make legal sense. What was the legal position of the victims? Did they have a right to a predecisional hearing? Did they have a right to a post-decisional hearing? What was the scope and purpose of a review: was it limited to showing errors of law apparent on the face of the record? The judgment gave no clue. It is not the legal discourse that carried the day, but practical consideration. As the Judge put it: 'One hesitates in matters of this type where large consequences follow one way or the other to put asunder what others have put together'; and later, something more, stating: 'To do a great right after all, it is permissible to do a little wrong.' But how did the court know that it was doing 'a little wrong' and not a great wrong? What was the measure of right and wrong used by the court? Considering that today, almost ten years later, not even a fraction of the victims have received compensation, the court did not do a little but a great wrong.

The judgment also left unresolved the status of the 14–15 February 1989 order. Was it a record of settlement or was it a court order? The question came into sharp focus on the issue of dropping the criminal proceedings. The Attorney General virtually disowned that part of the order which later came to be described as a 'court-assisted settlement'. This is what he submitted: 'The government, as such, had nothing to do with the question of criminal proceedings and it was

not representing the victims in respect of the criminal liability of Union Carbide and UCIL to the victims.' He further submitted that quashing of criminal proceedings was done by the court 'in exercise of plenary power under Articles 136 and 142 of the Constitution.' From this submission, it is clear that the strategy to defend the settlement had already been worked out which was later to be taken up by Union Carbide. The strategy was: split the settlement into civil and criminal; ensure that the civil settlement is upheld, and dump the criminal settlement. The strategy was later to work very well.

The court also held that the GoI as a condition of 'having taken over the conduct of the litigation' was liable to pay interim relief to the victims. This device alone could have taken care of the argument of delays and help bring the case to a meaningful conclusion.

The challenge to the settlement was heard in 1990. Rajiv Gandhi had lost the election in 1989 and V.P. Singh became the Prime Minister. To his government will go the credit of announcing an interim relief program. The relationship between the victims and the government being impaired, the V.P. Singh Government announced that it would support the challenge to the settlement. Soli Sorabjee who was appointed Attorney General had a difficult agenda set out for him: to challenge a settlement while not challenging the authority of the government to enter into the settlement. The government itself did not file a petition to review the settlement, hence it never did disclose the grounds for thinking that the settlement was bad in law. It 'supported' the challenge of the victims.

Strategies for the challenge differed very widely. Soli Sorabjee concentrated his attack on the grant of criminal immunity and quashing of criminal proceedings. He demonstrated successfully that such an exercise was impermissible. In view of K. Parasaran's earlier concession that the government had not agreed to quash criminal proceedings, the debate was entirely about the power of the court to quash the criminal proceedings. The government said little or nothing about the adequacy of the amount to be paid agreed upon. This was for the obvious reason that even in mid 1990, the government was nowhere near completing the medical exercise and had no clue to the nature and extent of injury caused and the number of persons affected,. This was clear from affidavits filed by the State of M.P. Surely, the court should have been alerted by this and realized that there was something very wrong with the figures on which the settlement was based.

On 3 October 1991, the day after Gandhi Jayanti, the Supreme Court announced the judgment upholding the settlement. Once again one was left with the impression that the court was determined to uphold the settlement regardless of the legalities. In fact, Justice M.N. Venkatachaliah went so far as to say that the petitioners had sought to raise a 'hypertechnical' objection. This is how the court dealt with the objection that the rules of natural justice were not complied with. The court asserted that it had the power to quash criminal proceedings in appropriate cases, but that in this case, there were no public interest grounds for doing so. The petitioners had argued that Union Carbide and GoI had agreed to a composite settlement that the settlement was indivisible, that the dropping of the criminal proceedings was part of the consideration for the agreement to pay damages, and hence the entire settlement was bad. The court met the argument by saying that it might have been the motive but not the consideration for the settlement. Though it was so obvious that the dropping of the criminal proceedings was part of the agreement of Union Carbide with the GoI, the court was only too willing to take upon itself the burden of having quashed the proceedings and sought to remedy this wrong by restoring the proceedings.

On the question of the power of the Supreme Court to quash proceedings, the court asserted: 'The proposition that a provision in any ordinary law, irrespective of the importance of the public policy on which it is founded operates to limit the power of the apex court under Article 142 (1) is unsound and erroneous.' In plain language, the Supreme Court is here saying that it is not bound by any laws – for laws, after all, are 'ordinary' – in contradistinction to its own power which is constitutional. The Supreme Court, therefore, is not bound to decide in accordance with statutory law and can act in defiance of it. This is perhaps one of the most retrograde aspects of the whole judgment – the assertion of power by the Supreme Court which is unguided by statute and unlimited.

Be that as it may, why did the Court quash proceedings in 1989 and restore them in 1991? 'It is a matter of importance that offenses alleged in the context of a disaster of such gravity and magnitude should not remain uninvestigated.' Is it sought to be suggested that in 1989 the court was unaware of the 'gravity and magnitude' of the disaster? The *ex-post-facto* justification of the civil settlement and the restoration of the criminal proceedings leave one with the impression that, in February 1989 the court acted as no more than a rubber

stamping authority and abdicated its authority to ensure that the settlement was fair.

The court recognized that the victims had a right to be heard, that they were not heard and that they must have a reasonable sense of participation. Without defining the scope of the hearing, without disclosing particulars on which the settlement was based, the court proceeded to pronounce on the adequacy of the settlement amount. Dr Nishith Vora and Dr C Satyamala, believing that the real battle over the settlement centered around the number of persons affected and the nature of the injury, had done a study based on a sample survey of the victims *Against All Odds*. The report demonstrated conclusively that the medical exercise conducted by the State of M.P. was unscientific, based on a system of assigning scores. They argued, based on ICMR studies, that the injuries caused were to the respiratory system, gastro-intestinal system, neuro-muscular-skeletal system, ocular system, and mental and reproductive systems. They argued that the 4 May order grossly underestimated the nature and extent of injury. They estimated the number seriously injured at more than 3,00,000 as against the figure of 30,000 suggested by the government. There was a progressive increase in the number of persons injured, they pointed out.

Although the 4 May 1989 order categorized injuries as leading to permanent total disability, permanent partial disability, temporary total disability, injuries of utmost severity, minor injuries and death, it failed to spell out the criteria for an injury as falling into any of these categories. The result was that the State of M.P. was left free to adopt its own criteria – which, till today, have never been judicially examined. In the absence of such judicially tested criteria and their application to individual cases, it was impossible to arrive at an estimate of the number of persons injured. The court not only abdicated its responsibility to spell out the criteria before the settlement, but even after. The result is that the victims were relegated to the mercy of the medical establishment of the State of M.P. In the final analysis, it was the State Government and not the Supreme Court who controlled the fate of the victims.

Medical experts, who at best could be witnesses, became judges of the criteria for assessing injury. Dr Vora and Dr Satyamala, by examining those shown as suffering from 'no injury' demonstrated that they were actually suffering serious injuries. The methodology

adopted by them was appreciated by *Lancet*. By attempting to diagnose gas-related diseased, it (the study) presents a much clearer picture of the damage than that presented by the government. They argued that any settlement to be just and fair must spell out the criteria for assessing nature and extent of injury, make provision for asymptomatic persons becoming symptomatic later, provide for medical surveillance, provide for new type of diseases surfacing such as brain damage, effects on puberty and fertility, provide for the possibility of long term damage such as cancer or other genetic damage by providing for a reopen clause, address the question of shortfall and provide that Union Carbide be subject to the continuing jurisdiction of the Indian Courts.

The 3 October 1991 judgment which ostensibly brought the curtain down on the long drawn out legal battle over the validity of the February 1989 settlement raised more questions than it answered: who were the victims; how many were they; what was the nature of their injury. The Supreme Court washed its conscience and its hands off the case.

As a consequence of the failure to spell out the criteria, the Claims Commissioners under the Act became the sole arbitrators of these criteria.

The victims had demanded an opportunity to show that the criteria adopted were unrelated to the nature of disease and the right to cross-examine the so-called experts. Not only was the opportunity denied, but the Court accepted, without question, the affidavits filed by the State of M.P. as being valid. These were very seriously disputed questions of fact. Why was the affidavit of the State of M.P. relying on the opinion of so-called experts accepted without a challenge? Expert testimony cannot be accepted without subjecting it to cross examination.

The State of M.P. had asserted that 1,54,813 exposed persons suffered no injury, 1,72,776 suffered temporary injury, 18,763 suffered permanent injury, 7153 suffered temporary disablement caused by temporary injury, 2663 suffered permanent partial disablement and the grand figure of 40 only suffered permanent total disablement. As against this, Dr Vora and Dr Satyamala had estimated 2.83 lakh injured. They had actually examined those stated to be not injured and demonstrated them to be suffering serious injury. And yet all their efforts were brushed aside with one simple sentence: 'The stand of

the directorate cannot be brushed aside as being arbitrary.' The court then posed the rhetorical question: 'Shall we then set aside the settlement on the mere possibility that the medical documentation and categorization are faulty'? To begin with, that this was more than a 'mere possibility' was evident from the wide disparity between the figures given in the 4 May order, those based on ICMR studies and those given by the government and those given by the victims. The victims had demanded an opportunity to prove that the government figures were wide off the mark and this opportunity was denied. And yet the court said: 'The charge that medical documentation was faulty and was calculated to play down the effects of exposure to MIC, in our opinion is unsubstantiated.'

After having 'looked into' the medical folders of the victims, the court was satisfied that 'particular care' was taken by the State of M.P. What kind of judicial procedure permits 'looking into' as a substitute for proof of seriously disputed facts? The Supreme Court perhaps forgot that having transferred the suit to itself, it was acting as a court of original jurisdiction and not as a court exercising judicial review of administrative action. With the transfer of the suit to the Supreme Court came the responsibility of a trial court. The court however assumed the power without the responsibility.

To the claim for medical surveillance, the court 'hopes and trusts' that Union Carbide will pay Rs.50 crore towards construction of a well equipped hospital. Ten years later, the hospital is nowhere in sight. Union Carbide applied to the Supreme Court for permission to sell its shareholding in UCIL so that the sale proceeds could go towards the hospital building. The shares were attached by the Criminal Court as both Union Carbide and Warren Anderson had been declared absconders and had refused to stand trial. The Supreme Court permitted the attachment to be lifted and the shares to be sold. With this, any surviving hope that the absconders would agree to stand trial disappeared.

The greatest victory for Union Carbide came when the Supreme Court accepted the settlement as 'full and final' for what this meant was that Union Carbide, from 3 October 1991, onwards was no longer subject to the jurisdiction of the Indian Courts. The condition of Judge Keenan's judgment had been fulfilled and Union Carbide was released from any obligation to continue to be subject to the jurisdiction of Indian Courts.

In the balance, what did the long drawn out litigation achieve? A restoration of the criminal proceedings and US$470 million in the hands of the Claims Commissioner. Was the restoration of criminal charges a victory for the victims? An arrest warrant has been issued against Warren Anderson. No serious efforts have been made to seek his extradition to India. Union Carbide was restrained from disposing off its US$17 million shareholding in UCIL. The case against the Indian officials has been ordered for hearing. The victims have no hope of seeing them convicted in the foreseeable future.

And what of the compensation?

Each claimant is required to submit an individual claim before the Claims Commissioners, who are relying entirely on the medical exercise conducted by the State of M.P. Even so, as of today, only a fraction of the claims have been adjudicated. The maximum that may be paid for catastrophic injuries is Rs.4,00,000. The legal heirs of the dead would get between Rs.1,00,000 to Rs.3,00,000, depending on the loss of dependency. The injured would receive between Rs.50,000 and Rs.1,00,000.

These amounts are abysmally low, even if compared with amounts that victims of motor accidents in this country have been receiving. Union Carbide succeeded in its strategy of paying as little as possible, certainly much less than it ever would have had to pay for an accident of this magnitude in the US.

If any lessons are to be learnt from the case, it would be pointless to blame Union Carbide alone. The truth is Union Carbide would not have succeeded in its game plan if it were not for the assistance received from the GoI and the courts in India.

Almost ten years after the disaster, more than 2,50,000 claims have not even been scrutinized.

Union Carbide was restrained from disposing off its US$17 million shareholding in UCIL by the Chief Judicial Magistrate. Bhopal after Union Carbide and Warren Anderson had been declared absconders. The object of the order was to penalize a person who seeks to avoid his arrest and to put pressure on the absconders with a view to compel them to appear in court. To this day, both Union Carbide and Warren Anderson have refused to appear before the Chief Judicial Magistrate and submit to the jurisdiction of the Indian Criminal Court. And yet the Supreme Court of India, through Chief Justice

Venkatachaliah and Justice Mohan, entertained an application filed by Union Carbide, Union of India and Sir Ian Percival, trustee of the Bhopal Gas Hospital Trust for permission to sell the Union Carbide shares in UCIL so that the money generated could be utilized for construction of a hospital in Bhopal in discharge of an obligation arising out of a suggestion made by the Supreme Court in its judgment of 3 October 1993.

Bypassing the Chief Judicial Magistrate and even the High Court, an application was made to lift a valid and subsisting attachment order to the Supreme Court. By order of 14 February 1994 the Supreme Court lifted the attachment and permitted the sale of Union Carbide shares in UCIL. Out of the sale proceeds, a sum of Rs.60 crore was to be handed over to the Union of India towards construction of a hospital, the balance of the sale proceeds were to be kept in an escrow account. Immediately thereafter, Union Carbide and Sir Ian Percival made an application to the Supreme Court stating that the pendency of the criminal proceedings was preventing Union Carbide from getting a good price in the international market and seeking direction. Mercifully, the Supreme Court declined the invitation to give 'directions' for the sale of shares so as to secure the best price, or else, we might even have seen a dropping of the criminal proceedings, 'in the larger interest of the victims.' So much for the criminal proceedings reduced to trying absconders *in absentia*.

At the time of writing there is news that McLeod Russel India Ltd., owned by the B.M. Khaitan group have signed a contract with Union Carbide for acquiring the 50.9% share in UCIL at a price of Rs.290.23 crore. Out of this, a sum of Rs.60 crore will be handed over to the government towards the cost of building the proposed hospital. Ten years later, the victims are forgotten, the civil suit is finished and the criminal proceedings reduced to a meaningless formality. No doubt, a time might come when Union Carbide will be able to argue that the trial should be quashed on the ground that it has been unduly delayed. Union Carbide the absconder, Union Carbide the accused, Union Carbide that refuses to submit to the jurisdiction of the Indian criminal courts, is yet able to make its convenient chance appearances in the Supreme Court and get orders. Why should the Supreme Court hear the Company when it has been declared a proclaimed offender? As for the hospital, construction of which has not even commenced ten years after the disaster, what purpose will it serve after the victims have died during the intervening years? Per-

haps it will be an eloquent memorial to the sacrifice of the victims on the altar of multinational profits.

What lessons can one draw at the end of the struggle?

First, we must frankly acknowledge that the legal system failed the victims and then begin to consider reforms. Our legal regime requires a radical reorientation. Given the so called New Economic policy which welcomes investments in every conceivable sector, we will see the emergence of multinationals in pursuit of cheap labor and markets. We need to introduce a system of laws which will make them accountable for standards of safety equal to those prevailing in their countries of origin.

Next, we need to see international treaties which will enable the victims of any tragedy to sue these companies in the country of origin or in their own home countries at their (the victims') choice. Multinationals operating in India, must agree as a condition of doing business, that they will submit to the jurisdiction of the Indian Courts, both civil and criminal. They must agree to be responsible for the acts of their subsidiaries and not disown them like rats leaving a sinking ship. They must accept as a binding rule absolute liability for their hazardous activities.

The sacrifice of the victims of the Bhopal tragedy will have been in vain unless some of these changes can be introduced in the law. In addition, all victims of personal injury must have the right to claim interim damages if they can show a *prima facie* case. Such provisions have been introduced in other countries, why not in India? Why have the Indian authorities not woken up, even after Bhopal, to amend our laws? We need a functioning system of legal aid to enable victims to enforce their rights. And yes, we should consider legalizing the system of contingency fees, for after all is said and done, despite the criticism that the system of ambulance chases has taken, to have someone representing your case is better than not having anyone at all.

In any case, it is time we drop our hypocrisy and acknowledge that even today, many lawyers, in fact, do function on a contingency fee basis. The cost of legal services in this country are exorbitant to the point of being extortionist. And while the rich may willingly surrender their wealth to their lawyers, the poor have nothing to share except their poverty – they are invisible to the legal system.

Postscript

The Bhopal Settlement sanctioned by the Supreme Court on 4 May 1989 was based on the assumption that only about 3000 human lives were lost and about 102,000 others had sustained injuries as a result of exposure to toxic gases that had emanated on the night of 2–3 December 1984 from the premises of *Union Carbide India Limited (UCIL)*, a subsidiary of *Union Carbide Corporation (UCC)*, USA. However, according to the 2003 Annual Report of the Bhopal Gas Tragedy Relief and Rehabilitation Department, as on 31 October 2003, the total number of cases awarded compensation by the Claim Courts under the category of death was 15,310 and the number of those cases who have been awarded compensation for injury was 554,895. The total amount disbursed as compensation under both the categories until then was around Rs.1530 crores. After paying all the claims, there was an unutilized amount of Rs.1500 crores lying with the Reserve bank of India. On 19 July 2004, the Supreme Court directed that this amount be immediately disbursed to the 5,54,896 victims and relatives of the 15,000 dead. What do these figures signify?

First, that the amounts disbursed to the victims until 19 July 2004 were abysmally low, well below their actual entitlements. This is what explains the so called 'surplus.' Secondly, an amount which was based on the assumption that about 3000 had died and about one lakh injured, has been disbursed to five times that number. This too once again proves that each individual claimant has been underpaid. An amount rightfully belonging to 3000 dead and one lakh injured has gone to 15000 dead and 5,55,000 injured! Has one victim been robbed to pay another? Has the Welfare Commissioner consciously distributed lower amounts knowing that the money has to go further than it was intended to?

It may be recalled that under the Bhopal Settlement, UCC had agreed to pay an amount of US$470 million (Rs.710 crore at the then [1989] prevailing exchange rate of approximately Rs.15 to US$1) as compensation. As per the order of the Supreme Court dated 4 May 1989, 84 percent of that amount was to be disbursed as compensation to 3000 cases of death and 102,000 cases under four different categories of injuries – from injuries of utmost severity to simple injuries. (Sixteen percent of it was set aside to compensate those who had lost personal property and livestock.) On 16 October 1992, the Supreme

Court gave a clear direction in response to an application filed by BGPMUS that the compensation amount lying in the Settlement Fund would not be used for any purpose other than as compensation to the victims.

Adjudication of claims began in the Claim Courts only from 1992 onwards and the process is yet not complete. Meanwhile, the compensation amount, which was retained in a Dollar Account, not only accrued interest but also appreciated considerably in value in terms of Rupees due to the rising exchange rate of the USD vis-à-vis, the Rupee. (In 1992 the exchange rate was approx. Rs.30 to US$1 and by 2000 it had become Rs.45 to US$1) Thus, by 2003, despite disbursing about Rs.1520 crores, almost an equal amount still remained in the Settlement Fund. The accrued interest rightly belonged to the 3000 dead and one lakh injured. It was under these circumstances that 30 individual victims filed a petition before the Supreme Court urging the Court to issue directions to disburse the amount on a pro-rata basis.

The Supreme Court on 19 July 2004 gave directions to disburse the remaining amount of Rs.1503 crore on a pro-rata basis to all those who have been awarded compensation till date (after taking into consideration the 16,000 pending cases before the Claims Commissioner).

However, if indeed, the 570,000 claimants had been paid compensation from the amount earmarked under the terms of the settlement, more than *five times* the settlement amount would have been required to compensate all of them.

In fact what has happened is that the compensation amounts awarded to over 465,000 additionally acknowledged victims have actually come from the compensation amount that should have been legitimately paid only to the 105,000 victims for whom it was earmarked. The benefit of rise in exchange rate and accruing interest should have legitimately gone to those 105,000 victims who were covered under the terms of the settlement, but that never happened. The question that will now have to be addressed by the court is, who will augment the fund so as to compensate the increased number of victims? Who will increase the fund by five times so that victims get what was contemplated for them under the settlement? Who will recover the funds from Union Carbide Corporation or its successor in inters Dow Chemicals? The number of identified victims, makes a

mockery of the settlement entered into in 1989. Many of us forewarned the court that the estimated figures were too low, but we lost the battle then. Let us hope, now that the numbers have been established, adequate compensation is made available to them, even if it be twenty years later.

(This postscript was written after the Supreme Court judgement dated 19 July 2004)

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Note: The Bhopal Action Research Centre has published a detailed bibliography of books, articles and newspaper stories on the Bhopal Gas Disaster. A good source of information is www.Bhopal.net

How you can help the Bhopal gas survivors

The Sambhavna Trust and Clinic

Sambhavna is a Sanskrit/Hindi word which means 'possibility'. Read as 'sama' and 'bhavna' it means 'similar feelings' or 'compassion'.

Set up in June 1985 as a charitable trust, Sambhavna started its clinic close to the severely affected communities in September 1996 for providing free medical care to the survivors of the disaster. Since then over 13,500 chronically ill survivors have been registered for treatment through modern medicine, *ayurveda* (indigenous system of medicine based on plants and minerals), *yoga* and massage therapy with very encouraging results.

In addition to medical care, the clinic also carries out research into the long term effects of the gas and treatment efficacies. It monitors exposure-related deaths, conducts surveys and health education exercises in the communities and runs a documentation centre that collects and distributes information on the disaster.

More than half of the staff of 36 are survivors of the disaster themselves. Decisions regarding the day to day running of the clinic are taken by a five-member steering committee nominated from among the staff. The six trustees of the Sambhavna include medical researchers, scientists, writers and activists who have long been involved with medical and other aspects of the disaster.

In the eight years of its running, Sambhavna has been successful in developing safe, simple, inexpensive and effective treatments for a number of symptom complexes related to toxic exposure. Our research has been published in international journals including the Journal of the American Medical Association (JAMA).

Community health workers of Sambhavna have designed and implemented an effective system of community control over tuberculosis, a disease three times more prevalent among survivors of Bhopal. Efforts in care through *yoga* have yielded drug-free effective treatment regimes for respiratory disorders, diabetes and menstrual irregularities.

For its path breaking work among the survivors, the Sambhavna Trust was awarded the Japanese Tajiri Muneaki Prize in July 1999, the 'Inner Flame Award' by the Governor of Madhya Pradesh in 2001 and the international MEAD 2001 AWARD by the Margaret Mead 2001 Centennial Committee in 2002.

Sambhavna does not accept funds from corporations, corporate charities, governments or large funding agencies. All funds required to run the Sambhavna Trust Clinic have come as donations from over 8000 individuals in India, UK, USA and other countries. Internationally known authors Dominique Lapierre and

Javier Moro regularly contribute to Sambhavna from the royalties of their book 'Five minutes past midnight in Bhopal'. Much of the work of Sambhavna is carried out with the help of volunteers from different parts of the world.

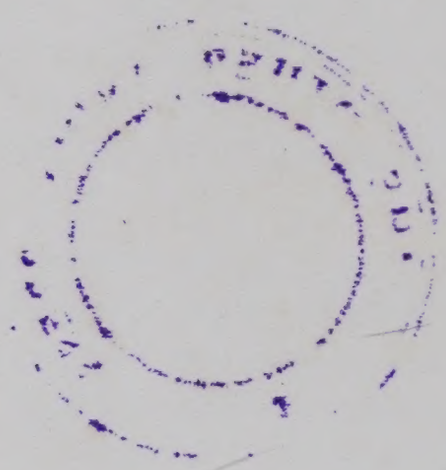
Donations to Sambhavna's work can also be made via secured credit card transaction through our website: www.bhopal.org or through any of the places below:

In India :
Send your donation by Cheque / Money Order to
Sambhavna Trust, No.44,
Sant Kanwar Ram Nagar, Berasia Road,
Bhopal 462 018.
Tel: +91-755-2730914 / 2743157
Email: sambavna@sancharnet.in

In the USA :
Donations may be sent to:
Pesticide Action Network North America (PANNA)
49 Powell Street,
500, San Francisco CA 94102
Tel: 415-981-1771
Fax: 415-981-1991
Email: panna@panna.org
Indicate in a note that you wish your donation to go towards work in Bhopal.

In Europe :
You can post your cheque in favour of
'Pesticide Action Network / Bhopal Account' to
Barbara Dinham
Pesticide Action Network UK, Development House
56-64 Leonard Street, London EC2A 4JX
Tel +44 (0) 20 7065 0905. Fax +44 (0) 20 7065 0907
E-mail: admin@pan-uk.org

Many thanks!



THE OTHER INDIA PRESS

BHOPAL

THE INSIDE STORY

On the night of 2/3 December 1984, 40 tons of deadly methyl isocyanate (MIC) leaked out of a Union Carbide factory in Bhopal, India, killing hundreds of innocent people and maiming thousands of others for life.

In *Bhopal: The Inside Story*, T.R. Chouhan, a former worker in the plant, tells for the first time his own explosive story of what it was like to work in the dangerous chemical factory that was destined to go down in history as the site of the world's worst industrial disaster. He also recounts in detail how the gas disaster actually occurred.

The book provides, in addition, personal testimonies and other eye-witness accounts from fifteen other Union Carbide workers. These stories relate horrendous industrial situations and practices within the plant, blowing to smithereens the carefully nurtured myth that top-class multinationals like Union Carbide always use world-class technology for their production wherever they set up shop.

The book concludes with three separate essays on the gas disaster and its aftermath written by ***Claude Alvares***, ***Indira Jaising*** and ***Nityanand Jayaraman***.

T.R. Chouhan was an MIC Plant Operator at Union Carbide's Bhopal plant. He and his family ran for their lives, as did hundreds of thousands of others, on the awful night of 2/3 December 1984. Since the disaster, Chouhan has been a major informant for both journalists and official investigators. This book is a culmination of several years of research and commitment.

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